U. S. DEPARTMENT OF COMMERCE
SINCLAIR WEEKS, Secretary
WEATHER BUREAU
F. W. REICHELDERFER, Chief

CLIMATOLOGICAL DATA

NATIONAL SUMMARY

JUNE 1955
Volume 6 No. 6

ASHEVILLE: 1955

C O N T E N T S

NOTE.--This publication contains all of the climatic data formerly printed in the MONTHLY WEATHER REVIEW.

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CLIMATOLOGICAL DATA

NATIONAL SUMMARY

Volume 6 No. 6 JUNE 1955

GENERAL SUMMARY OF WEATHER CONDITIONS

Unseasonably cool weather over virtually the entire Country was the main weather feature of June 1955. The cool weather in the far West was a continuation of a subnormal trend beginning late in 1954, while east of the Rocky Mountains it marked a reversal of the unusual warmth of April and May. Rainfall east of the Rockies was extremely variable in short distances but occurred at timely intervals and thus was mostly sufficient to maintain adequate soil moisture for crops which generally were in good condition at the end of the month. In the far West precipitation was too light to furnish any relief to the droughty areas in Utah and Nevada, but thunderstorm activity brought the heaviest June rainfall to Arizona in many years. The month's sunshine, well below normal in western Washington and in Nebraska and some adjacent areas, ranged from slightly below to much above normal elsewhere.

TEMPERATURE.--Temperatures for June averaged below normal everywhere except in northern portions of the Intermountain Region, the Rio Grande Valley below Del Rio, Texas, and along the Canadian Border from eastern North Dakota to New England where they were slightly above normal.

Below-normal temperature departures for the month were lowest (4° or more) in a large area extending from the central Great Plains to the Atlantic Coast. Statewide averages were the lowest on record for West Virginia, Kentucky, Alabama, Georgia, and the Carolinas and the lowest since 1903 in several other southern and eastern states. These low average temperatures resulted not from any record-breaking cold spells but from well below-normal temperatures which persisted virtually throughout the month. At Birmingham, Ala., for instance, the temperature failed to rise to normal levels during the entire month. The relatively coldest weather in this area occurred during the second week when weekly averages were as much as 12° below normal in the Midwest and minima ranged in the 60's along the Gulf Coast to the 40's near the Canadian Border where a few stations reported 32° or below.

In the far West lowest temperatures occurred either during the opening or closing days of the month, with frost and freezing being reported in scattered sections of the northern rockies during both periods. Highest temperatures occurred in most of this region during the second week when weekly averages ranged up to 12° above normal and maxima of 100° extended northward to Seattle, Wash. This was the first extended warm spell in the far West in several months.

Extremes for the month occurred in California, ranging from 123° at Greenland Ranch on the 7th to 10° at Twin Lakes on the 1st.

PRECIPITATION.--June precipitation totaled over an inch from the Great Plains and northern Rockies eastward and also in western Washington and central Arizona. Areas with above-normal amounts were most extensive along the western slopes of the Rockies, in the Great Plains, and the central Mississippi Valley.

Total rainfall for Arizona was the greatest since 1927 and the third heaviest of record. Monthly totals ranged up to 4.60 inches and several stations reported new June records.

In another area of heavy rainfall including western Oklahoma and the eastern portion of the Texas Panhandle, Memphis, Tex., had a monthly total of 11.89 inches and Miami, Okla., 7.95 inches.

Rains were also exceptionally heavy in extreme western Nebraska and southeastern Wyoming where heaviest amounts fell on the 26th and 27th. Monthly totals reported by the Official Weather Bureau network of stations ranged up to 8.11 inches at Tarrington Experiment Farm in Wyoming and 9.40 inches at Bloomington, Nebr. Of the 8.11 inches at Tarrington, 5.53 inches fell during the storm of the 26th and 27th. Greater unofficial storm totals were reported.

Scattered localities of the Northeast reported the driest June in many years, but most of these spots had good soil moisture reserves owing to good rains in May and suffered little or no adverse effects.

DESTRUCTIVE STORMS.--Numerous wind- and hailstorms during the month caused many millions of dollars damage. Damage in the Carolinas totaled nearly $10,000,000 and in Texas over $8,000,000. One of the worst hailstorms occurred in Amarillo, Tex., on the 19th, damaging 6,000 houses and 1,500 automobiles for a total loss of $2,000,000. One of the month's worst tornadoes struck Scottsbluff, Nebr., on the 27th, killing 2 persons, injuring 20, and causing property losses estimated at $450,000. Heavy rains associated with the Scottsbluff tornado resulted in heavy flood losses in southeastern Wyoming. A flash flood in Las Vegas, Nev., on the 13th caused losses of $1,500,000.

CONDENSED CLIMATOLOGICAL SUMMARY

Table 1 — JUNE 1955

Section	Temperature								Precipitation					
	Average	Departure from normal	Monthly extremes						Average	Departure from normal	Monthly extremes			
			Station	Highest	Date	Station	Lowest	Date			Station	Greatest	Station	Least
	°F.	°F.		°F.			°F.		In.	In.		In.		In.
Alabama	73.3	-5.1	2 Stations	100	23	Sylacauga 4NE	42	1	2.99	-1.25	Atmore State Farm	7.53	Wilson Dam	0.84
Arizona	72.9	-1.5	Davis Dam	119	8	Maverick	19	3	1.07	.72	Bar T Bar Ranch	4.60	31 Stations	.00
Arkansas	73.1	-4.4	Camden 1	99	23+	Gilbert	44	8	3.65	-.35	Gilbert	10.50	2 Stations	.28
California	68.7	-.9	Greenland Ranch	123	7	Twin Lakes	10	1	.08	-.22	Lake City	2.66	277 Stations	.00
Colorado	60.0	-1.5	Eversoll Ranch	101	24	Fraser	18	2+	1.04	-.41	Holyoke	5.62	Conejos 3NNW	.00
Connecticut	64.5	-1.6	Waterbury City Hall	90	22	Mansfield Hollow Dam	36	4	2.89	-.62	2 Stations	4.51	Middletown 4W	1.66
Delaware	68.6	-2.9	2 Stations	93	22	6 Stations	48	4+	6.33	2.56	Selbyville	8.23	Georgetown 5SW	4.75
Florida	78.5	-1.5	Lake City 2E	102	22	Jasper 9ESE	49	3	6.29	-.35	South Miami 3W	14.48	2 Stations	1.09
Georgia	74.3	-4.3	Hainbridge	100	21+	Blairsville Exp. Sta.	39	1	2.98	-1.41	Savannah WB AP	6.57	Quitman	.62
Idaho	60.2	-.1	Grand View	107	21	Big Creek 1S	19	1	1.49	.17	Elk City	3.37	Shoshone	.13
Illinois	68.6	-3.5	E.St.Louis Parks Col	99	21	Stockton	39	10	3.86	-.16	Bradford CAA AP	7.82	Roberts 3N	2.07
Indiana	67.2	-4.0	7 Stations	95	19+	4 Stations	40	1	3.28	-.68	Huntingburg	5.65	Monroeville	1.28
Iowa	67.2	-2.4	8 Stations	95	20+	Sibley	37	13	3.07	-1.47	Lake Mills	7.14	2 Stations	.75
Kansas	70.6	-3.2	Liberal	103	24	Goodland WB AP	39	9+	3.70	-.27	LaCygne	10.09	Syracuse	.04
Kentucky	68.2	-5.7	2 Stations	94	21	Benham	40	1	4.29	.12	Munfordville	7.99	Louisa 2	2.01
Louisiana	77.0	-3.4	Natchitoches	99	26+	4 Stations	48	11+	3.75	-.72	Winnsboro	9.81	Logansport	.42
Maine	62.5	.9	Augusta CAA AP	95	19	East Sangerville 5SE	32	9+	2.73	-.74	Farmington	5.96	Fort Kent	.47
Maryland	67.9	-3.0	Ocean City	96	29	Oakland 1SE	33	2+	5.45	1.48	Picardy	8.28	Ocean City	.76
Massachusetts	64.4	-.9	Shelburne Falls	96	19	3 Stations	38	8+	3.17	-.32	Ware 2	5.98	Chatham	1.45
Michigan	64.5	.6	2 Stations	93	16	2 Stations	30	1	2.43	-.98	Paw Paw	5.63	Hale Five Channels D	.64
Minnesota	65.0	.6	3 Stations	97	30	3 Stations	36	12+	3.44	-.65	Madison	9.33	Minneapolis WB AP	1.53
Mississippi	74.0	-4.1	4 Stations	98	22+	do	49	1+	3.07	-1.02	Rolling Fork	7.62	Crystal Springs 4NNE	.55
Missouri	69.6	-3.7	3 Stations	97	20+	2 Stations	40	15	4.62	-.18	Granby	9.67	Clearwater Dam	1.70
Montana	58.9	-1.6	2 Stations	102	22+	Wisdom	19	1	2.06	-.74	Baker	6.77	Hinsdale	.27
Nebraska	66.0	-3.4	Benkelman	101	29	3 Stations	36	5+	4.19	.42	Bloomington 2S	9.40	Waunets	1.50
Nevada	65.2	.0	2 Stations	117	8+	Kimberly	15	1	.38	-.14	Las Vegas	1.87	11 Stations	.00
New Hampshire	63.5	.4	Lebanon CAA AP	94	18	3 Stations	34	5+	4.36	.71	Mount Washington	8.53	Concord WB AP	2.18
New Jersey	67.5	-1.7	Sussex 3N	95	16	Tuckerton 2SW	40	4	4.05	.29	Berlin 1W	6.69	Sandy Hook	.59
New Mexico	68.2	-1.5	Carlsbad CAA AP	108	8	2 Stations	17	2	.41	-.78	Clovis	2.66	16 Stations	.00
New York	64.9	.2	Little Falls Mill St	96	18	Old Forge 2SW	32	3	2.22	-1.34	Glens Falls Feeder Dam	7.32	Buffalo WB AP	.11
North Carolina	70.2	-4.5	Whiteville	99	6	Celo 2S	30	1	3.76	-.85	Gloucester Gap	8.40	Daybook	.76
North Dakota	62.1	-1.0	Watford City	93	29	Dunn Center	33	8	3.27	-.24	Amidon	6.34	Ambrose	1.15
Ohio	66.4	-3.4	5 Stations	94	5+	Mansfield 6W	35	1	2.66	-1.27	Apco Ravenna Arsenal	5.02	Bowling Green Sewage Pl.	.55
Oklahoma	74.4	-3.2	2 Stations	105	24	5 Stations	44	4+	3.06	-.95	Miami	7.95	Cloudy Tower	.20
Oregon	60.2	.4	Illahe 1N	111	8	Fremont	13	16	.82	-.61	Sundown Ranch	3.48	Ashland	.00
Pennsylvania	65.1	-3.0	West Chester	94	22	2 Stations	33	2+	3.69	-.40	Coatesville 1SW	7.46	Hop Bottom 2SE	.78
Rhode Island	63.9	-.8	2 Stations	88	29+	Kingston	38	10	3.40	.47	Greenville	5.91	Block Island WB AP	.81
South Carolina	73.5	-4.3	Kershaw	98	22	Long Creek 1N	43	1+	3.62	-.98	Summerville 2WNW	8.61	Anderson CAA AP	1.01
South Dakota	63.8	-2.3	2 Stations	101	29+	Deerfield Dam	26	5	3.26	-.34	2 Stations	6.23	Vale	.52
Tennessee	69.6	-5.3	Samburg Wildlife Refuge	95	22	2 Stations	40	1	3.44	-.75	Monterey	7.73	Iron City	.88
Texas	78.5	-1.1	Presidio	113	8+	Mount Locke	36	10	2.40	-.39	Memphis	11.89	6 Stations	.00
Utah	62.9	-1.6	2 Stations	107	8	Moon Lake	19	2	.77	.07	Lower American Fork	3.62	3 Stations	.00
Vermont	63.5	.3	3 Stations	92	18+	4 Stations	35	3+	3.49	-.23	Mount Mansfield	7.36	West Topsham	1.58
Virginia	67.7	-4.1	do	95	6+	Burkes Garden	34	1+	3.94	-.16	Mathews 1SSW	9.52	Haysi	1.33
Washington	60.6	-.2	2 Stations	104	11+	Rainier Paradise RS	27	1+	1.27	-.34	2 Stations	4.92	White Swan	T
West Virginia	64.3	-5.5	Clarksburg 1	95	7	Canaan Valley	28	2	3.79	-.71	Romney 3NNE	9.35	Matoaka	1.45
Wisconsin	64.5	-.3	3 Stations	96	30	Long Lake Dam	32	25+	3.55	-.64	Mount Horeb 1WSW	7.12	Trempealeau Dam 6	1.64
Wyoming	57.3	-1.4	5 Stations	95	23+	Elk Mountain	18	4	2.17	.35	Torrington Exp Farm	8.11	Saratoga	.25

+ And also on a later date or dates.

Note: Dates in Table 1 apply to the period 24 hours prior to time of observation. In some cases the actual occurrence is on the calendar date preceding that shown. (See individual Climatological Data for times of observations).

CLIMATOLOGICAL DATA

Table 2

JUNE 1955

State and station	Elevation (ground)	Pressure: Station	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No. of days: Max. 90° F. or above	Temperature: No. of days: Min. 32° F. or below	Temperature: Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No. of days: .01 inch or more	Precipitation: No. of days: With thunderstorms	Precipitation: Snow, Sleet, Hail: Total	Precipitation: Snow, Sleet, Hail: Max. depth on ground	Wind: Average hourly speed	Wind: Prevailing direction	Wind: Fastest mile: Speed	Wind: Fastest mile: Direction	Wind: Fastest mile: Date	No. of days (sunrise to sunset): Clear	No. of days (sunrise to sunset): Partly cloudy	No. of days (sunrise to sunset): Cloudy	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	Ft.	Mb.	Mb.	°F.	°F.	°F.	°F.	°F.		°F.				°F.	%	In.	In.	In.			In.	In.	M. p. h.		M. p. h.			0–3	4–7	8–10	0–10	%
ALABAMA																																
Birmingham	610	990.4	1015.5	84	61	72.4	-5.0	91	23	51	1	4	0	60	67	2.06	-2.15	0.65	8	4	0.0	0	6.2	NE	38	N	23	11	9	10	5.2	65
Mobile	211	1007.2	1015.2	89	66	77.6	-2.0	96	21	58	12	15	0	65	70	2.22	-3.87	1.09	8	10	.0	0	8.0	S	---	---	---	11	13	6	4.8	--
Montgomery	198	1007.6	1015.2	86	65	75.6	-4.0	94	26	56	1	8	0	63	69	4.82	.13	1.55	7	7	.0	0	6.6	W	37	W	26	12	13	5	4.5	81
ARIZONA																																
Flagstaff	6993	------	------	74	38	55.9	-2.4	88	8	22	2	0	4	--	--	2.92	2.39	2.63	3	2	T	T	----	---	--	---	--	21	8	1	2.4	--
Phoenix	1114	969.9	1008.1	99	68	83.7	-.2	112	8+	55	2	26	0	45	28	.95	.89	.94	2	2	T	0	5.9	E	*23	WSW	13	25	4	1	1.5	99
Prescott	5014	846.3	1011.1	85	52	68.4	-1.7	101	8	35	2	8	0	--	--	1.87	1.64	1.73	2	3	T	T	10.6	SSW	38	NE	8	22	6	2	2.2	94
Tucson	2558	922.5	1008.4	99	66	82.3	.2	110	22	47	2	28	0	29	17	.03	-.27	.03	1	2	.0	0	8.0	WSW	29	SW	13	24	6	0	1.4	97
Winslow	4880	850.3	1008.7	87	54	70.3	-1.1	99	22	41	2	14	0	26	24	2.12	1.83	2.12	2	2	.0	0	8.9	WSW	*36	WSW	1	23	3	4	2.3	--
Yuma	199	1003.1	1008.0	103	68	85.5	-2.3	116	9	54	1	28	0	38	22	.00	-.01	.00	0	0	.0	0	8.1	S	27	S	10	29	1	0	.5	100
ARKANSAS																																
Fort Smith	458	997.3	1014.0	86	64	74.7	-3.6	95	25	52	10+	10	0	65	75	2.15	-2.16	1.15	10	7	.0	0	8.1	E	26	SW	27	8	12	10	5.9	61
Little Rock	257	1001.7	1014.4	85	65	74.7	-3.8	92	21+	53	11	7	0	62	68	3.84	.41	1.62	10	8	T	0	8.4	ENE	30	W	10+	6	17	7	5.9	60
Texarkana	361	------	------	87	65	76.0	-3.9	93	22+	52	11	12	0	--	--	1.49	-2.36	.90	5	5	.0	0	----	---	--	---	--	--	--	--	---	--
CALIFORNIA																																
Bakersfield	489	994.6	1012.7	91	61	75.6	-1.3	103	6+	50	1	16	0	45	36	.00	-.09	.00	0	0	.0	0	7.8	NW	*23	WNW	9+	25	3	2	1.6	--
Bishop	4108	871.0	1009.5	91	47	69.2	-.2	104	8	32	2	19	1	--	--	.00	-.10	.00	0	0	.0	0	----	---	---	---	--	22	7	1	2.2	--
Blue Canyon	5280	839.8	1013.5	68	50	59.0	.0	87	8	38	1	0	0	--	--	.30	-.74	.30	2	4	.0	0	----	---	---	---	--	20	6	4	2.9	--
Burbank	699	987.5	1013.8	78	56	66.6	-.9	91	3	44	1	1	0	53	68	T	-.07	T	0	0	.0	0	4.8	S	*17	NW	3	10	13	7	4.9	--
Eureka CO	43	1015.9	1018.3	57	48	52.9	-2.7	64	5	43	1+	0	0	--	--	.11	-.55	.03	6	0	.0	0	7.3	---	26	NW	1	5	5	20	7.2	59
Fresno	331	1000.7	1012.3	88	57	72.3	-3.4	101	8	44	1	12	0	47	44	.00	-.11	.00	0	0	.0	0	7.6	NW	25	NW	9	25	4	1	1.5	98
Los Angeles CO	312	------	------	75	58	66.7	-1.1	85	22	51	1	0	0	55	71	.01	-.06	.01	1	0	.0	0	5.5	---	19	W	3	8	18	4	4.9	62
Los Angeles	99	1010.2	1013.9	70	58	63.9	-.8	76	22+	50	1	0	0	55	76	.07	.00	.07	1	0	.0	0	7.3	W	%23	W	1+	4	17	9	5.7	--
Mt. Shasta CO	3544	892.0	1014.7	76	45	60.6	.8	94	9	35	29	4	0	--	--	.27	-1.96	.17	2	3	.0	0	----	---	---	---	--	20	4	6	3.4	--
Oakland	3	1015.9	1016.2	67	51	59.1	-2.5	89	4	46	2	0	0	50	75	T	-.15	T	0	0	.0	0	9.4	W	*27	WSW	22+	15	9	6	4.3	--
Red Bluff	341	1000.3	1012.8	89	61	74.9	-1.1	108	8	53	14+	14	0	44	37	.26	-.20	.21	2	3	.0	0	10.6	SSE	35	SE	22	21	2	7	2.8	89
Sacramento	17	1012.2	1013.0	85	53	69.2	-1.1	102	8	45	1	9	0	49	54	T	-.11	T	0	0	.0	0	11.0	SSW	38	SW	25	23	6	1	1.7	92
Sandberg CO	4517	862.2	1011.9	74	53	63.4	-1.4	92	8	39	1	1	0	--	--	.00	-.04	.00	0	0	.0	0	----	---	---	---	--	21	8	1	2.0	--
San Diego	19	1010.8	1014.2	70	59	64.7	-.9	78	22	55	1+	0	0	55	72	T	-.04	T	0	0	.0	0	7.4	WSW	20	S	24	9	16	5	5.2	54
San Francisco CO	52	------	------	63	51	57.0	-2.1	85	4	47	1	0	0	--	--	T	-.15	T	0	0	.0	0	11.6	---	32	W	28	13	11	6	4.4	65
San Francisco	1	1015.2	1015.8	68	50	59.3	-.4	92	4	44	1	1	0	49	76	T	-.13	T	0	0	.0	0	15.2	WNW	36	WNW	22	14	8	8	4.7	--
Santa Maria	238	1006.8	1015.6	66	48	57.3	-2.8	77	3	36	2	0	0	49	79	T	-.14	T	0	0	.0	0	8.0	WNW	*27	WNW	23	11	14	5	4.8	--
COLORADO																																
Alamosa	7538	773.1	1014.9	76	41	58.1	-.5	85	8	30	5	0	3	--	--	.11	-.38	.11	1	4	T	T	----	---	---	---	--	14	12	4	4.2	--
Colorado Springs	6173	811.4	1012.7	76	48	62.3	-3.2	89	23+	36	4+	0	0	39	51	.43	-1.36	.13	7	9	T	0	11.8	SSE	*35	SSW	2+	10	16	4	4.7	--
Denver	5292	837.5	1012.0	77	51	64.0	-2.4	94	23	39	4	2	0	40	49	1.39	-.25	.43	11	11	T	T	10.0	S	37	N	9	4	15	11	6.0	63
Grand Junction	4849	858.1	1010.8	83	56	69.6	-1.6	96	22	41	2	7	0	31	29	.24	-.21	.15	5	3	T	0	10.3	ESE	50	SW	1	14	11	5	4.0	83
Pueblo	4639	855.7	1011.5	82	54	68.2	-.9	98	28	43	5	6	0	42	47	1.64	.24	.91	8	10	T	T	9.9	SE	57	N	4	11	14	5	4.9	71
CONNECTICUT																																
Bridgeport	7	1012.5	------	76	58	67.0	.1	88	30+	51	10+	0	0	--	--	2.18	-1.29	.64	13	6	T	T	----	---	--	---	--	7	10	13	6.3	--
Hartford	169	1006.8	1012.7	77	55	66.1	-2.8	89	29	45	4	0	0	55	71	3.46	-.16	1.30	12	5	T	0	9.6	S	31	NE	3	5	8	17	6.7	49
New Haven	6	1011.9	1012.5	74	57	65.3	-.5	85	23	48	8	0	0	--	--	2.54	-1.27	.89	15	9	.0	0	5.9	---	23	NE	3	6	10	14	6.5	60
DELAWARE																																
Wilmington	73	1010.1	1013.4	79	59	68.7	-3.1	91	22	49	10	1	0	58	71	6.34	2.32	2.67	10	6	.0	0	7.9	NW	--	---	--	8	12	10	6.0	--
DIST. OF COLUMBIA																																
Washington CO	72	------	------	80	61	70.7	-3.2	92	17	53	10+	4	0	--	--	3.92	.50	1.79	10	6	.0	0	7.2	---	26	SE	8	--	--	--	---	--
Wash. Nat'l. AP	14	1010.0	1014.3	79	61	70.2	-3.2	91	30	52	10+	2	0	57	66	2.76	-.65	1.36	9	5	.0	0	10.2	WNW	37	E	8	12	10	8	5.2	59
FLORIDA																																
Apalachicola	13	1013.7	1014.9	84	71	77.5	-2.4	90	9	64	1	1	0	--	--	3.27	-2.20	1.14	8	11	.0	0	7.8	---	33	SE	17	14	9	7	4.2	82
Daytona Beach	31	1013.7	1015.2	87	67	77.2	-1.9	93	22+	58	3	11	0	67	75	7.76	1.07	1.59	14	13	.0	0	9.1	SSW	*28	SE	25	7	12	11	6.0	--
Fort Myers	15	1014.6	------	89	69	78.9	-1.7	93	24+	61	4	16	0	--	--	8.53	-.67	2.63	15	11	.0	0	6.9	---	*37	NW	11	5	13	12	6.1	--
Jacksonville CO	16	------	------	88	70	79.1	-1.1	96	22	64	2+	11	0	--	--	4.41	-2.26	1.40	13	--	.0	0	----	---	---	---	--	---	---	---	---	--
Jacksonville	24	1013.9	1015.1	91	69	80.1	-.2	100	22	59	3	20	0	65	65	2.70	-4.12	.90	12	6	.0	0	9.7	WSW	37	NE	17	8	11	11	5.9	56
Key West CO	9	1013.6	1014.5	89	76	82.7	.1	92	29+	69	16	18	0	--	--	6.13	2.12	3.18	9	8	.0	0	6.5	---	21	W	18	7	15	8	5.6	79
Lakeland CO	214	------	------	89	70	79.4	-.7	94	24+	65	3	15	0	--	--	3.47	-4.64	.65	11	13	.0	0	6.5	---	--	---	--	9	12	9	5.3	70
Miami CO	8	------	------	84	74	79.1	-1.2	90	9	69	18+	1	0	--	--	7.67	2.12	3.94	10	16	.0	0	10.5	---	32	NE	2	6	18	6	5.6	62
Miami	8	1013.8	1014.8	88	73	80.3	-1.0	93	9	68	3+	5	0	72	78	9.69	2.87	3.79	17	11	.0	0	9.2	SE	*29	SSW	18	3	18	9	6.7	--
Miami Beach	9	------	------	86	76	80.7	-.8	94	9	71	19	2	0	--	--	6.94	1.91	3.48	12	--	.0	0	----	---	---	---	--	10	10	10	---	--
Orlando	106	1011.1	1015.3	90	69	79.3	-1.5	95	10	61	3	17	0	67	73	4.73	-3.12	1.47	12	12	.0	0	8.4	SSW	*29	WNW	28	9	13	8	5.6	--
Pensacola CO	13	1013.0	------	86	70	78.0	-1.6	91	26+	62	1	4	0	--	--	6.73	1.56	1.67	8	10	T	T	8.3	---	28	W	10	--	---	---	---	89
Tallahassee	64	1012.3	1014.8	89	65	77.4	-2.3	97	22	58	12+	15	0	63	68	5.99	-.73	2.42	11	8	T	0	6.1	NE	--	---	--	8	12	10	5.9	--
Tampa	19	1014.0	1015.2	88	69	78.6	-1.8	92	22	63	3	11	0	67	71	2.55	-5.22	.75	9	13	.0	0	8.9	W	*23	WNW	18	6	8	16	5.5	74
West Palm Beach	15	1013.8	1014.7	88	71	79.5	-1.1	93	9	66	10	12	0	71	79	6.93	-.96	2.44	13	11	.0	0	9.9	SE	*40	SSE	18	5	13	12	6.6	--
GEORGIA																																
Atlanta	977	974.1	1014.9	84	62	72.9	-4.8	92	23+	54	8	3	0	59	66	3.53	.49	1.02	9	5	T	0	8.3	NW	43	W	7	4	17	9	5.8	71
Athens	798	986.3	------	85	61	72.8	-6.1	94	22	51	8	7	0	--	--	2.36	-1.48	1.08	6	6	.0	0	----	---	---	---	--	13	13	4	4.5	--
Augusta	143	1007.8	1014.2	87	61	74.0	-6.0	95	23	51	2	10	0	62	70	2.47	-1.27	1.86	5	5	.0	0	6.9	WSW	*29	W	7	9	11	10	5.5	--
Columbus	385	1001.2	1015.2	86	63	74.3	-4.7	93	26+	54	8+	7	0	--	--	1.29	-2.66	.44	6	6	.0	0	----	---	---	---	--	11	12	7	5.2	--
Macon	356	1001.2	1014.5	87	64	75.7	-5.2	95	22	54	2	12	0	60	62	3.07	-.68	1.50	8	4	.0	0	7.9	W	33	W	7	9	13	8	5.2	72
Rome	637	992.3	------	84	59	71.4	-6.0	94	22	49	2	6	0	--	--	3.02	-1.05	1.15	6	6	.0	0	----	---	---	---	--	8	14	8	5.3	--
Savannah	48	1012.0	1014.4	87	64	75.7	-4.0	94	4	53	16	10	0	66	74	6.57	1.40	2.72	12	11	T	T	9.7	NE	32	NW	11	10	11	9	5.6	70
IDAHO																																
Boise	2842	917.4	1012.0	81	52	66.7	1.6	102	21	36	1	7	0	41	48	.63	-.21	.47	6	2	.0	0	11.9	NW	45	NW	23	13	12	5	4.1	84
Idaho Falls 46W CO	4933	847.6	1012.9	76	42	59.0	-.6	95	22	29	30	3	3	--	--	1.03	.22	.45	8	3	.0	0	9.2	---	a28	SW	29	---	---	---	---	--
Idaho Falls 43NW CO	4780	------	------	75	42	58.8	-.8	93	21	32	30	2	1	--	--	.91	-.17	.66	8	--	---	--	9.7	---	a34	S	29	---	---	---	---	--
Lewiston	1413	962.4	1013.2	80	53	66.7	.4	99	21	42	2+	7	0	--	--	.52	-1.23	.37	5	1	.0	0	----	---	---	---	--	10	8	12	5.7	--
Pocatello	4444	861.5	1012.8	76	46	60.9	-2.1	95	22	36	1	2	0	39	50	1.30	.28	.49	7	6	T	T	11.8	SW	50	W	12	9	11	10	5.6	70
ILLINOIS																																
Cairo CO	314	1001.7	------	82	63	72.7	-5.1	95	21	54	11+	5	0	--	--	4.72	.88	1.93	10	8	.0	0	6.6	---	33	N	23	11	10	9	5.2	79
Chicago	610	991.2	1013.8	79	60	69.1	-.3	94	30	50	12+	3	0	54	60	3.04	-1.11	1.11	12	4	T	T	9.0	S	32	W	5	9	11	10	5.8	66
Moline	589	992.9	1014.8	78	58	67.8	-3.0	91	30	47	13	1	0	55	68	3.65	-.98	1.21	10	5	.0	0	9.6	S	32	N	1	10	4	16	6.2	53
Peoria	654	992.2	1014.4	78	59	68.4	-2.5	92	30	47	14	1	0	56	64	3.20	-.68	1.36	10	8	.0	0	8.8	---	43	W	4	11	7	12	5.7	66
Springfield	587	991.2	1014.1	80	59	69.5	-2.4	93	30	45	14	1	0	57	69	2.50	-1.68	1.16	12	7	.0	0	10.8	S	31	NW	8	11	5	14	5.8	67
INDIANA																																
Evansville	383	999.0	1014.6	80	58	69.3	-5.3	94	21	47	1	3	0	58	71	3.04	-.83	1.20	9	4	.0	0	6.8	SW	29	SW	11	11	7	12	5.8	62
Fort Wayne	801	983.4	1014.1	80	56	68.1	-.9	94	19	48	1+	3	0	53	63	2.80	-.76	.98	10	5	T	0	9.5	NW	39	W	5	9	9	12	5.8	66
Indianapolis	793	985.4	1014.9	78	57	67.1	-4.3	89	21	45	14	0	0	55	69	1.79	-2.42	.54	10	3	.0	0	8.6	SE	31	SW	11	9	8	13	6.0	58
South Bend	768	986.8	1014.5	77	56	66.3	-2.4	91	30	45	14	1	0	55	69	2.17	-1.66	.72	9	6	.0	0	8.8	S	*25	WNW	22	10	10	10	5.5	--

See footnotes at end of table.

CLIMATOLOGICAL DATA

Table 2—Continued

JUNE 1955

State and station	Elevation (ground)	Pressure: Station	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No. days Max 90° F. or above	Temperature: No. days Min 32° F. or below	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No. of days 0.1 inch or more	Precipitation: No. of days With thunderstorms	Precipitation: Snow, Sleet, Hail Total	Precipitation: Snow, Sleet, Hail Max. depth on ground	Wind: Average hourly speed	Wind: Prevailing direction	Wind: Fastest mile Speed	Wind: Fastest mile Direction	Wind: Fastest mile Date	No. of days (sunrise to sunset) Clear	Partly cloudy	Cloudy	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	Ft.	*Mb.*	*Mb.*	°F.	°F.	°F.	°F.	°F.		°F.				°F.	%	*In.*	*In.*	*In.*			*In.*	*In.*	*M. p. h.*		*M. p. h.*			0–3	4–7	8–10	0–10	%
IOWA																																
Burlington	694	989.2	1014.8	79	58	68.2	-3.5	92	30	48	13+	2	0	56	68	3.12	-2.52	1.01	10	6	T	0	9.4	S	28	NW	8	8	11	11	6.0	75
Des Moines	948	983.1	1014.1	79	58	68.6	-2.0	94	20	45	13	2	0	53	63	1.71	-3.28	.76	11	6	.0	0	14.4	S	41	W	3	4	13	13	6.6	68
Dubuque	1065	975.6	1014.5	75	56	65.1	-2.7	88	30	41	10	0	0	55	68	3.41	-1.68	.97	11	7	T	0	----	---	--	--	--	7	8	15	6.8	--
Sioux City	1094	972.2	1013.0	79	58	68.6	-1.7	95	20	47	9	3	0	55	66	2.91	-1.50	.94	15	11	.0	0	13.2	SSE	43	S	27	6	10	14	6.3	58
KANSAS																																
Concordia CO	1375	963.4	------	80	61	70.4	-3.5	96	30	49	9+	5	0	--	66	3.42	-.81	.90	12	11	T	T	8.5	---	47	NW	4	4	14	12	6.6	41
Dodge City	2594	925.8	1012.0	81	59	69.9	-3.6	96	30	45	10	3	0	56	66	2.18	-.83	.80	9	13	T	T	15.4	S	*46	NNW	9	10	10	10	5.8	--
Goodland	3645	887.9	1012.6	79	52	65.6	-2.9	95	29	39	9+	6	0	49	64	2.59	-.43	.90	14	14	T	T	13.4	SE	*46	NNW	9	10	10	10	5.8	--
Topeka	879	978.3	1013.7	82	60	70.9	-2.9	96	21	49	9	4	0	59	68	5.06	.52	1.52	13	11	.0	0	11.8	S	57	NW	4	3	10	17	7.2	60
Wichita	1321	964.8	1012.6	81	62	71.6	-3.7	93	30	49	10	6	0	60	71	3.98	-1.01	1.79	13	14	T	T	13.9	S	43	S	28	5	9	16	6.9	65
KENTUCKY																																
Lexington	978	980.0	1014.9	78	57	67.9	-4.3	89	21	49	1	0	0	57	71	4.06	-.15	1.16	10	8	.0	0	9.3	S	--	---	--	9	10	11	5.9	--
Louisville	485	995.4	1014.5	81	59	69.7	-4.5	91	21	50	1	4	0	58	71	3.36	-.68	.98	11	7	.0	0	7.4	SE	34	SE	6	10	6	14	5.8	54
LOUISIANA																																
Baton Rouge	64	1011.5	1014.6	89	66	77.8	-1.8	96	22	58	12	18	0	65	70	3.53	-1.49	1.12	10	7	.0	0	6.5	W	--	---	--	11	12	7	4.7	--
Lake Charles	12	1013.2	1014.5	88	69	78.7	-2.0	93	27	60	10+	10	0	68	73	4.85	-.20	2.25	8	10	.0	0	6.9	S	*23	S	5+	9	13	8	5.0	--
New Orleans CO	9	1012.9	------	89	72	80.4	-1.5	94	26	64	11	12	0	---	--	1.44	-4.13	.79	7	10	.0	0	5.8	---	20	NW	10	12	15	3	4.3	70
New Orleans	3	1012.9	1014.9	89	69	78.8	-1.7	95	26	60	11	14	0	68	74	4.42	-1.21	1.93	8	9	.0	0	8.0	SSW	*35	W	9	12	13	5	4.4	--
Shreveport	252	1005.1	1014.4	88	67	77.5	-3.6	95	26	55	11	15	0	65	71	2.67	.03	1.67	5	6	.0	0	8.5	S	--	---	--	11	14	5	4.6	79
MAINE																																
Caribou	624	988.1	1011.8	71	50	60.6	2.2	90	18	39	3	1	0	51	74	2.44	-1.51	.97	11	7	.0	0	8.6	WSW	*29	WSW	30	4	11	15	6.9	--
Portland	61	1008.1	1012.3	73	52	62.6	.8	90	29+	42	10	2	0	55	79	2.31	-1.01	1.16	11	8	.0	0	7.3	E	33	E	12+	5	10	15	6.9	56
MARYLAND																																
Baltimore CO	14	------	------	80	63	71.5	-2.8	91	30+	53	8	6	0	--	--	7.83	4.31	2.75	10	--	---	--	----	---	--	--	--	--	--	--	---	--
Baltimore	146	1009.4	1014.3	78	59	68.5	-3.7	90	30	50	1	1	0	59	74	6.73	3.21	2.38	9	6	T	0	10.2	WNW	42	NE	8	11	12	7	5.3	67
Frederick	294	------	------	78	56	67.1	-5.5	90	30+	48	4	2	0	--	--	3.94	-.02	1.32	9	2	.0	0	----	---	--	--	--	--	--	--	---	--
MASSACHUSETTS																																
Blue Hill Obs.	629	989.3	1012.4	73	55	62.9	-1.1	89	30	44	8	0	0	--	77	3.32	-.86	1.79	13	4	.0	0	11.8	SW	27	NE	8+	6	8	16	6.6	50
Boston	15	1007.3	1012.0	75	59	66.8	-.4	92	30	50	10+	4	0	56	71	3.52	.04	2.10	13	3	.0	0	11.0	SW	*33	WNW	16	5	11	14	6.5	63
Nantucket	43	1012.1	1012.8	65	54	59.7	-1.2	75	30+	46	10+	0	0	55	88	1.90	-1.34	.92	7	3	.0	0	13.3	SW	34	S	12	8	6	16	6.4	60
Pittsfield	1153	970.3	1011.9	73	52	62.4	-.6	86	18	41	10	0	0	--	--	3.91	-.68	2.48	9	6	T	T	----	---	--	--	--	--	--	--	---	--
MICHIGAN																																
Alpena CO	587	991.9	------	72	55	63.6	2.1	89	29	46	1	0	0	--	--	.76	-1.79	.24	7	1	.0	0	8.6	---	26	W	22	9	14	7	5.1	68
Detroit	619	988.2	1014.3	79	59	68.5	.4	89	19	48	15	0	0	54	61	1.87	-1.03	.57	10	5	.0	0	7.5	S	29	W	22	8	12	10	5.4	67
Detroit (Willow Run)	722	986.1	1014.0	79	57	68.4	-.2	91	19	49	13	4	0	53	63	1.97	-1.29	.68	9	3	.0	0	9.0	WNW	*28	WNW	22	8	12	10	5.3	--
East Lansing CO	856	------	------	79	56	67.7	.3	89	19	48	1+	0	0	--	--	3.81	.44	1.83	8	4	.0	0	4.1	---	22	SE	6	--	--	--	---	59
Escanaba CO	594	991.5	------	71	54	62.2	1.5	84	16	44	11	0	0	--	--	1.41	-1.39	.42	9	4	T	0	9.3	---	35	N	12	7	10	13	5.9	56
Grand Rapids	681	989.2	1014.1	78	55	66.4	-.3	87	4+	42	1	0	0	54	67	2.20	-1.15	.99	7	6	.0	0	5.2	W	25	S	6	12	9	9	5.3	67
Marquette	677	986.8	------	72	55	63.5	3.9	88	4	41	12	0	0	--	66	1.92	-1.54	1.58	9	5	T	T	7.5	---	30	W	4	7	7	16	6.5	58
Muskegon	627	991.2	1014.5	76	55	65.1	.7	85	18+	41	1	0	0	53	63	3.01	.14	1.55	8	5	.0	0	----	---	--	--	--	13	6	11	4.8	--
Sault Ste. Marie	721	991.9	1014.4	74	51	62.7	4.6	86	17+	41	1	0	0	53	74	1.26	-1.76	.34	9	3	.0	0	8.0	WNW	24	NW	14	9	10	11	5.5	58
MINNESOTA																																
Duluth	1409	972.6	1013.6	73	51	62.1	2.4	87	29	42	13	0	0	52	73	3.98	-.35	1.03	14	9	T	T	11.1	ESE	34	W	21	7	10	13	6.5	56
Intern'l Falls	1179	970.2	1012.9	74	51	62.5	2.4	88	29	37	12	0	0	53	72	6.72	2.99	2.42	14	10	T	0	8.4	---	--	---	--	9	6	15	6.5	--
Minneapolis	830	980.4	1013.6	78	58	68.2	.0	96	30	48	12	1	0	53	64	1.53	-2.73	.52	12	7	.0	0	12.2	S	43	S	28	10	8	12	5.5	55
Rochester	1017	977.0	1013.8	76	54	65.1	-1.7	93	30	44	26	1	0	54	70	2.78	-1.55	.95	11	10	.0	0	9.3	S	--	---	--	10	7	13	5.9	--
St. Cloud	1034	975.3	1013.0	76	54	65.1	.1	95	30	42	8+	1	0	54	70	2.90	-.95	1.12	14	7	.0	0	7.7	WNW	--	---	--	11	7	12	6.0	--
MISSISSIPPI																																
Jackson	315	1003.0	1014.8	88	63	75.5	-4.4	93	26	55	13	16	0	63	68	.92	-2.80	.27	8	8	.0	0	5.4	WNW	36	NW	26	15	11	4	3.9	71
Meridian	294	1001.5	------	88	62	74.6	-4.5	94	26+	52	1	13	0	---	--	2.22	-2.11	.70	6	6	.0	0	----	---	--	---	--	15	11	4	3.8	--
Vicksburg CO	234	1005.6	------	86	67	76.7	-2.8	92	24+	57	11	9	0	---	--	3.08	-.23	2.22	7	7	T	T	6.5	---	30	SE	29	14	8	8	4.5	83
MISSOURI																																
Columbia	778	986.1	1014.2	80	60	69.6	-3.3	90	21+	47	14	2	0	58	68	7.07	2.17	3.47	8	8	T	T	8.7	SSE	40	NW	24	8	9	13	6.0	62
Kansas City	741	979.7	1014.0	80	63	71.3	-4.1	94	20	52	14	4	0	58	66	4.71	-.31	1.51	12	9	T	T	10.9	S	37	W	5	3	9	18	7.1	63
St. Joseph	809	------	------	81	59	70.0	-4.4	95	20	47	14	4	0	---	--	7.40	.94	4.76	14	14	T	T	----	---	--	---	--	--	--	--	---	--
St. Louis CO	465	994.2	------	81	64	72.5	-3.3	93	21	53	14	2	0	---	--	2.70	-1.10	1.57	8	4	.0	0	9.1	---	36	SW	5	9	8	13	6.0	55
St. Louis	552	994.2	1014.4	82	61	71.5	-3.6	94	21	49	14	4	0	57	64	4.78	.41	1.98	11	4	T	0	8.4	WNW	--	---	--	6	10	14	6.4	--
Springfield	1265	967.5	1014.5	78	59	68.5	-4.4	91	21	50	10+	1	0	59	76	4.03	-1.53	.85	11	12	T	0	12.2	SSE	44	NW	11	4	12	14	7.1	49
MONTANA																																
Billings	3568	891.0	1013.4	74	51	62.6	-1.4	90	21	42	1+	1	0	48	63	1.72	-.89	.43	11	9	T	T	10.6	N	44	W	29	4	14	12	6.4	72
Glasgow CO	2090	939.0	1013.6	76	51	63.7	-.5	93	29	42	6	3	0	46	56	.69	-2.79	.36	9	4	T	0	8.9	ESE	--	---	--	5	12	13	6.4	--
Great Falls	3664	887.9	1013.5	71	49	60.4	-.3	87	22	38	1	0	0	41	54	1.23	-1.73	.38	8	5	.0	0	12.4	SW	54	W	14	7	16	7	5.4	70
Havre CO	2488	925.5	1013.8	75	49	62.0	-.9	88	22	39	9	0	0	44	56	1.29	-1.69	.54	12	5	.0	0	9.1	---	38	W	14	9	11	10	5.5	62
Helena	3893	873.4	1014.3	72	46	58.8	-.6	91	22	37	1+	1	0	44	61	2.19	.04	.64	14	11	T	T	8.6	W	40	S	28	6	13	11	5.9	67
Kalispell	2965	------	------	73	45	59.3	.9	96	22	34	2	2	0	---	--	3.06	.63	1.32	10	6	T	T	----	---	--	---	--	8	13	9	5.5	--
Miles City	2629	929.9	1013.4	76	52	64.0	-1.2	96	29	40	6	3	0	49	---	1.96	-.88	.67	11	6	.0	0	9.5	SE	*39	WNW	29	5	11	14	6.5	--
Missoula	3200	901.5	1015.1	74	45	59.4	-.8	98	22	34	2	3	0	42	56	1.85	-.02	.66	11	8	T	T	8.1	W	38	NE	22	8	8	14	6.4	64
NEBRASKA																																
Grand Island	1841	947.9	1012.9	77	57	67.0	-4.6	97	1	45	9	4	0	55	68	4.65	.99	1.72	12	9	.0	0	13.1	S	--	---	--	6	8	16	6.6	--
Lincoln CO	1184	------	------	79	59	68.7	-4.1	94	30	47	9+	4	0	---	--	4.97	.87	2.01	12	12	T	0	9.1	---	39	N	23+	6	12	12	6.1	57
Norfolk	1544	958.3	1013.2	77	56	66.8	-2.5	98	1	46	9	3	0	55	67	4.93	.15	1.54	17	12	T	0	----	---	--	---	--	7	9	14	6.4	--
North Omaha	1323	965.8	------	77	57	67.1	---	92	20	45	9+	3	0	53	71	4.86	----	1.40	14	14	T	0	----	---	--	---	--	--	--	--	---	--
North Platte	2779	915.0	1012.4	75	53	63.7	-5.1	92	29	38	7	1	0	53	71	5.02	2.10	3.61	11	10	T	T	12.6	ESE	43	NE	19	6	10	14	6.5	50
Omaha	978	973.9	1013.6	80	59	69.2	-3.4	96	20	46	10	3	0	57	68	4.31	-.20	1.56	14	12	T	T	10.7	SSE	34	SE	27	8	10	12	6.1	51
Scottsbluff	3950	878.4	1012.6	75	51	63.0	-3.5	94	29	40	5+	3	0	49	67	3.18	.40	.96	13	10	T	T	12.2	ESE	--	---	--	8	7	15	6.3	--
Valentine CO	2581	921.8	------	73	53	63.1	-4.2	92	29	40	9	1	0	---	--	2.43	-.73	.89	13	8	T	0	9.2	---	27	NW	8	6	9	15	6.7	62
NEVADA																																
Elko	5075	844.2	1013.4	79	42	60.3	.0	94	8+	32	2	4	1	35	43	.52	-.18	.34	4	3	.0	0	6.1	WSW	*40	W	12	11	13	6	4.7	--
Ely	6257	809.0	1013.4	75	41	57.6	-2.0	86	8	29	1+	0	4	30	40	.76	.26	.44	2	2	1.7	1	10.4	---	34	SW	30	15	8	7	4.2	80
Las Vegas	2162	943.4	1007.2	97	66	81.6	-2.0	111	8	49	2	25	0	26	16	.39	.26	.39	1	1	T	T	12.0	SW	*32	WNW	13+	23	5	2	1.8	95
Reno	4397	861.5	1013.7	82	43	62.3	.8	98	8+	30	1	5	1	38	42	T	-.42	T	0	1	.0	0	7.7	WNW	45	NW	12	22	4	4	2.6	87
Winnemucca	4299	866.6	1012.4	82	44	63.1	-.9	97	8	32	24+	10	2	32	34	.35	-.44	.33	2	1	.0	0	9.0	--	43	W	22	15	8	7	3.9	77
NEW HAMPSHIRE																																
Concord	339	1001.5	1012.4	76	53	64.5	.4	93	18	42	10	2	0	55	75	2.18	-1.44	1.06	11	6	.0	0	3.6	NW	26	N	3	4	10	16	6.8	48
Mt. Washington	6262	806.2	------	50	40	45.1	.7	64	19+	29	1	0	4	--	90	8.53	2.27	1.57	17	0	T	0	21.7	W	73	SW	22	2	5	23	8.2	27

See footnotes at end of table.

CLIMATOLOGICAL DATA

Table 2—Continued

State and station	Elevation (ground)	Pressure: Station	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No. of days Max. 90° F. or above	Temperature: No. of days Min. 32° F. or below	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No. of days .01 inch or more	Precipitation: No. of days With thunderstorms	Snow, Sleet, Hail: Total	Snow, Sleet, Hail: Max. depth on ground	Wind: Average hourly speed	Wind: Prevailing direction	Wind: Fastest mile Speed	Wind: Fastest mile Direction	Wind: Fastest mile Date	No. of days (sunrise to sunset): Clear	Partly cloudy	Cloudy	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	Ft.	Mb.	Mb.	°F.	°F.	°F.	°F.	°F.		°F.				°F.	%	In.	In.	In.					M. p. h.		M. p. h.			0–3	4–7	8–10	0–10	%
NEW JERSEY																															
Atlantic City	8	1009.2	------	74	61	67.3	-1.4	88	29	51	10	0	0	--	--	6.29	3.30	3.15	11	7	T	T	14.6	---	52	NE	8	6	13	11	6.1	61
Newark	11	1011.8	1013.0	78	60	68.9	-1.6	91	23	51	9	5	0	56	67	2.94	-.86	.76	13	6	.0	0	9.9	WNW	*29	NE	4	9	6	15	6.3	--
Trenton	56	1005.9	1012.8	78	60	68.7	-2.1	90	22	51	9+	1	0	--	--	4.13	.26	1.47	13	7	T	T	8.1	---	36	SE	5	10	8	12	5.9	57
NEW MEXICO																															
Albuquerque	5310	847.6	1008.6	89	59	73.9	-1.0	98	24	49	10	15	0	30	25	.33	-.39	.33	2	2	.0	0	10.6	S	55	SE	10	21	5	4	2.7	92
Clayton	4969	845.2	1011.6	81	52	66.5	-3.1	94	24	41	10	5	0	--	--	.19	-1.72	.13	4	5	.0	0	-----	---	---	---	---	15	11	4	3.9	--
Roswell	3612	891.3	1009.8	93	59	75.7	-1.1	101	24+	45	4	24	0	40	33	.15	-1.32	.06	5	5	.0	0	10.0	---	43	S	1+	19	7	4	3.3	--
NEW YORK																															
Albany	277	1008.6	1012.4	78	56	67.0	.0	92	18	47	10+	2	0	56	72	2.05	-1.32	.40	13	11	.0	0	6.2	S	26	W	30	6	11	13	6.6	54
Binghamton	1001	955.0	1013.5	74	55	64.3	.1	86	18	45	1	0	0	53	70	2.48	-1.17	.74	11	6	T	T	10.4	NW	37	NW	21	4	12	14	6.8	62
Buffalo	693	986.5	1014.3	78	56	66.8	1.3	92	18	48	3	2	0	55	66	.11	-2.59	.09	3	0	.0	0	11.6	SW	31	SW	22+	10	12	8	5.6	77
New York CO	10	1001.4	------	76	61	68.6	-1.2	88	29	51	9+	0	0	--	--	2.17	-1.53	.39	11	6	.0	0	10.5	---	42	W	21	9	10	11	5.6	55
New York	19	1011.3	1013.2	78	62	70.0	-1.0	90	30+	51	9	4	0	56	65	2.02	-1.36	.72	14	5	.0	0	11.0	WNW	38	NE	8+	9	6	15	6.3	--
Rochester	543	994.4	1013.5	79	56	67.5	.9	91	7	46	3	2	0	55	65	1.09	-1.76	.56	3	2	.0	0	10.7	SW	34	W	22	12	9	9	5.0	75
Schenectady	217	-----	------	78	58	68.0	.0	92	18	47	3	1	0	--	--	2.45	-1.41	.70	13	--	.0	0	---	---	---	---	---	16	11	3	---	--
Syracuse	424	992.3	1014.0	79	57	68.3	.5	92	18	47	3	1	0	55	67	2.43	-1.25	1.57	8	9	T	T	9.8	WSW	43	N	19	12	9	9	5.4	64
NORTH CAROLINA																															
Asheville	2203	------	------	77	55	65.7	-5.6	85	22	45	1	0	0	--	--	2.97	-.55	.98	13	4	.0	0	6.1	---	31	NW	7	7	13	10	5.7	63
Charlotte	727	987.5	1014.8	85	61	73.1	-3.5	94	23+	52	15	8	0	58	65	2.31	-1.20	1.00	7	4	.0	0	8.1	SW	34	N	22	10	10	10	5.4	68
Greensboro	891	983.6	1015.1	82	58	70.0	-4.6	93	22	48	1	4	0	56	65	1.86	-1.76	.90	10	5	.0	0	6.2	SW	24	WNW	7+	12	10	8	5.0	76
Hatteras CO	4	1013.8	1014.4	79	68	73.1	-2.5	84	6	60	10	0	0	64	75	5.47	1.10	1.94	9	9	.0	0	12.0	SSW	39	SW	23	11	11	8	5.0	--
Raleigh	433	998.9	1014.6	83	59	71.0	-4.7	95	22	48	4+	6	0	58	69	2.13	-1.96	.73	10	6	.0	0	7.7	N	*23	NW	14	9	14	7	5.2	57
Wilmington	30	1013.3	------	84	64	73.7	-3.9	95	6	53	2	6	0	--	--	3.17	-1.32	1.33	10	6	.0	0	10.1	---	31	S	11+	11	12	7	4.8	71
Winston-Salem	967	980.2	1015.1	82	59	70.7	-4.2	92	22	50	1	5	0	57	64	1.99	-1.61	1.15	9	5	.0	0	8.8	NE	*29	WSW	25	12	10	8	4.9	--
NORTH DAKOTA																															
Bismarck	1650	953.3	1013.3	74	51	62.6	-1.7	92	29	39	8	1	0	52	71	4.59	1.26	1.23	15	11	T	T	11.4	WNW	39	SW	16	9	7	14	6.1	64
Devils Lake CO	1471	960.0	------	73	52	62.3	-.1	89	29	40	12	0	0	--	--	2.56	-.62	.72	13	6	.0	0	7.9	---	30	SW	30	12	5	13	5.7	55
Fargo	895	978.7	1012.8	76	55	65.4	.8	91	30	45	13	1	0	54	70	2.62	-.42	.54	11	8	.0	0	14.1	S	49	W	19	10	7	13	5.8	63
Williston CO	1877	946.5	1013.5	73	52	62.1	-.9	90	29	42	12	1	0	49	62	2.36	-1.23	1.09	10	5	.0	0	7.4	---	22	NW	8+	7	10	13	6.5	62
OHIO																															
Akron	1210	977.4	1015.5	76	54	65.0	-3.4	87	18+	45	15+	0	0	53	69	2.47	-1.37	.75	11	6	.0	0	9.0	SE	---	---	---	11	8	11	5.4	--
Cincinnati Obs.	761	------	------	79	58	68.5	-4.3	89	29+	51	14+	0	0	--	--	1.73	-2.32	.55	9	5	.0	0	4.5	---	19	NW	21	---	---	---	---	69
Cincinnati	869	983.0	1014.7	79	57	67.6	-4.2	88	21+	47	1	0	0	55	69	2.39	-1.65	1.16	8	3	.0	0	7.1	SSW	*23	SSW	11+	8	9	13	6.2	--
Cleveland	787	987.1	1014.6	79	56	67.9	-1.5	92	18	47	15	4	0	55	66	2.68	-.37	.86	8	5	.0	0	7.3	SSE	27	W	30	11	6	13	5.6	71
Columbus CO	724	------	------	79	59	69.0	-3.0	90	30	51	14	1	0	--	--	3.17	-.49	1.40	10	--	T	0	-----	---	---	---	---	---	---	---	---	--
Columbus	815	985.0	1014.8	79	55	66.9	-3.8	91	30	45	1	1	0	56	68	2.63	-1.70	.67	10	6	T	0	6.2	SE	43	NW	21	8	8	14	5.9	64
Dayton	1002	978.7	1014.6	78	58	67.9	-3.0	88	30+	50	14	0	0	54	67	2.80	-1.10	.77	12	5	T	0	9.3	NW	37	W	21	7	11	12	6.0	69
Portsmouth CO	15	990.7	------	79	55	67.3	-4.4	92	30	47	1	3	0	--	--	3.52	.11	1.38	10	5	T	T	3.4	---	%70	W	6	---	---	---	---	--
Sandusky	603	992.6	------	78	59	68.5	-1.4	91	6	51	15+	2	0	--	--	2.70	-1.03	1.61	6	1	.0	0	5.9	---	18	SW	30	12	13	5	4.3	73
Toledo	676	989.0	1014.2	79	55	67.3	---	92	19	48	24	3	0	53	65	2.75	----	1.48	10	5	.0	0	9.4	W	38	W	30	11	11	8	5.5	73
Youngstown	1178	972.9	1015.2	76	54	65.0	-3.0	86	18	46	2	0	0	54	71	3.23	-.48	1.75	8	5	T	0	6.8	SW	*32	WSW	11	10	9	11	5.4	--
OKLAHOMA																															
Oklahoma City	1280	970.2	1013.1	83	63	73.1	-4.4	92	26	50	10	4	0	61	70	6.68	2.75	3.64	11	11	.1	T	13.2	SSE	59	NW	15	6	17	7	5.7	--
Tulsa	672	989.2	1013.1	85	65	74.9	-2.6	95	21	51	11	8	0	61	64	1.56	-3.59	.62	10	8	T	0	10.9	S	43	W	5	5	12	13	6.0	74
OREGON																															
Astoria	8	1018.0	1019.0	62	49	55.3	-2.3	93	8	38	19	1	0	49	81	2.73	.41	1.25	15	1	.0	0	6.6	W	---	---	---	3	4	23	8.2	--
Burns CO	4140	872.7	1013.5	77	47	61.8	1.3	93	8+	33	1	2	0	34	41	.68	-.17	.64	3	5	.0	0	-----	---	---	---	---	11	13	6	4.9	--
Eugene	361	1004.4	1018.0	73	47	60.0	-1.3	93	8	36	16	1	0	--	--	.86	-.51	.54	7	0	.0	0	7.7	---	---	---	---	4	9	17	6.8	--
Meacham	4050	------	------	68	43	55.9	1.8	85	21	30	1	0	2	--	--	1.31	-1.30	.66	8	4	T	T	-----	---	---	---	---	10	12	8	5.4	--
Medford	1312	968.5	1015.8	80	50	65.2	.3	101	8	37	1	5	0	45	52	.07	-.90	.07	1	3	.0	0	7.6	WNW	*30	NW	22	12	13	5	4.2	--
Pendleton	1492	961.4	1014.3	80	53	66.7	.0	96	11	42	16	7	0	41	44	.41	-.80	.22	5	1	.0	0	12.5	W	*44	W	2+	12	12	6	4.6	--
Portland	21	1012.2	1017.7	71	51	60.7	-1.9	95	9	44	16	2	0	49	69	1.83	.11	.96	13	1	.0	0	6.6	NW	25	W	30	3	8	19	7.7	36
Roseburg	505	999.0	1017.6	75	48	61.4	---	96	8	37	16	3	0	--	--	.45	-.90	.21	7	1	.0	0	5.8	---	18	NW	1+	8	8	14	6.0	59
Salem	195	1010.5	1017.8	73	47	59.9	-2.9	98	8	37	16	2	0	48	69	1.09	-.13	.71	6	0	.0	0	6.8	WNW	---	---	---	5	7	18	7.2	--
Sexton Summit CO	3836	------	------	68	46	56.7	.7	91	8	32	1	1	1	--	--	.39	-1.11	.12	6	2	.0	0	-----	---	---	---	---	13	11	6	4.5	--
PENNSYLVANIA																															
Allentown	376	999.9	1014.0	78	56	67.0	-2.6	89	17+	48	10	0	0	56	72	3.66	-.39	1.66	10	4	.0	0	8.3	WSW	---	---	---	7	11	12	6.2	--
Harrisburg	335	1000.2	1013.9	78	59	68.7	-2.4	90	17	51	9	1	0	54	63	4.09	.45	2.17	7	3	.0	0	6.8	W	29	W	13	8	10	12	6.2	63
Philadelphia CO	26	------	------	78	61	69.9	-2.7	90	29	53	10+	1	0	--	--	3.99	.02	2.29	11	---	---	---	-----	---	---	---	---	---	---	---	---	---
Philadelphia	10	1008.9	1013.2	79	60	69.2	-2.9	90	22	50	10	1	0	57	69	4.06	.19	2.20	12	6	.0	0	9.7	WSW	35	E	8+	7	11	12	6.3	61
Pittsburgh CO	749	------	------	77	58	67.6	-4.1	89	30+	50	2	0	0	--	--	3.94	.11	2.66	10	--	.0	0	-----	---	---	---	---	---	---	---	---	64
Pittsburgh	1151	984.8	1015.2	75	55	65.1	-3.5	86	30+	48	26+	0	0	54	68	3.20	-.87	1.93	10	3	.0	0	8.2	WSW	*32	ESE	7	6	14	10	6.0	43
Reading CO	266	1001.4	1012.9	80	60	69.7	-1.6	91	22	52	9	2	0	--	--	5.03	1.27	1.89	11	5	T	T	9.1	---	43	W	12	4	11	15	6.8	51
Scranton	940	980.0	1014.1	77	55	66.0	-2.1	89	18	48	3+	0	0	--	--	.99	-2.86	.64	9	4	.0	0	6.5	SW	28	NE	3	8	10	12	6.1	54
Shippingport CO	740	------	------	76	53	64.7	---	87	18+	45	3	0	0	--	--	2.99	----	1.63	10	6	.0	0	2.3	---	%35	W	30	---	---	---	---	---
Williamsport	527	995.0	------	80	56	67.6	-1.6	91	20	47	3	2	0	--	--	1.77	-1.65	.86	9	--	.0	0	-----	---	---	---	---	7	11	12	5.9	--
RHODE ISLAND																															
Block Island	110	------	------	70	55	62.3	-.7	82	29	45	8+	0	0	--	--	.81	-2.05	.38	9	0	.0	0	-----	---	---	---	---	10	7	13	---	--
Providence	55	1006.3	1012.5	75	56	65.2	-.4	88	30+	44	10+	0	0	56	74	3.72	.55	1.40	14	6	T	0	8.3	SW	*29	NW	21	6	10	14	6.3	56
SOUTH CAROLINA																															
Charleston CO	9	------	------	84	70	76.8	-2.8	92	6+	61	16	2	0	--	--	2.86	-1.43	1.47	8	9	.0	0	10.8	---	31	E	18	11	7	12	5.4	76
Charleston	41	1012.9	1014.9	85	65	75.0	-2.9	93	5	54	3+	3	0	64	72	3.47	-1.25	1.82	11	7	.0	0	11.3	SSW	---	---	---	8	11	11	6.0	--
Columbia	217	1005.7	1013.9	87	62	74.6	-4.9	96	23	51	2+	9	0	61	66	1.26	-2.79	.76	6	5	.0	0	7.5	SW	*23	WSW	12+	9	14	7	5.2	82
Florence	146	1009.0	------	86	63	74.3	-4.7	94	6	55	3+	8	0	--	--	2.47	-2.41	.75	10	6	.0	0	-----	---	---	---	---	12	9	9	4.9	--
Greenville	1018	977.7	1014.5	82	61	71.8	-4.8	93	22	53	9+	2	0	--	--	3.27	.27	1.68	10	8	.0	0	10.1	NE	35	SW	23+	6	15	9	5.8	68
Spartanburg	801	------	------	82	62	72.0	-5.2	91	22	53	15+	2	0	56	61	3.47	.47	1.45	9	7	.0	0	7.8	---	*29	SW	23	---	---	---	---	---
SOUTH DAKOTA																															
Huron	1282	966.1	1012.4	78	55	66.1	-2.1	91	29	41	13	2	0	54	69	2.39	-.67	.63	15	9	.0	0	11.1	SSE	46	W	2	10	10	10	5.5	71
Rapid City	3165	900.8	1013.6	73	51	62.2	-1.5	99	29	39	9	2	0	48	64	2.14	-1.22	.43	10	9	T	0	12.1	NW	56	NW	8	7	8	15	6.6	44
Sioux Falls	1420	962.4	1013.1	77	55	66.1	-1.9	92	30	43	13	1	0	52	66	4.24	-.01	2.11	12	7	T	T	10.4	SSE	*32	SW	3	9	8	13	6.1	--
TENNESSEE																															
Bristol	1519	961.6	------	79	56	67.6	-4.7	88	22+	44	1	0	0	--	--	2.20	-1.47	.81	10	6	T	0	-----	---	---	---	---	7	11	12	6.0	--
Chattanooga	670	988.1	1015.2	83	60	71.5	-4.3	91	22	52	2+	1	0	60	73	3.29	-.92	1.10	10	6	T	0	5.1	NNE	39	W	25	10	12	8	5.5	70
Knoxville	950	980.5	1015.5	81	60	70.5	-5.3	89	30+	51	1	0	0	58	69	3.65	.18	1.22	11	4	T	0	7.0	NE	37	W	7	6	12	12	6.0	62
Memphis CO	271	------	------	83	66	74.3	-4.4	91	24+	55	11	4	0	--	--	6.89	3.64	1.69	10	--	T	T	-----	---	---	---	---	---	---	---	---	---
Memphis	263	1000.3	1014.9	85	64	74.2	-4.1	94	22	54	11+	8	0	62	69	4.02	.69	1.63	12	7	.0	0	7.9	NE	29	S	5	9	13	8	5.6	73
Nashville	577	995.4	1015.2	83	60	71.4	-5.5	91	30+	50	1	9	0	60	71	2.94	-.25	1.20	11	6	T	0	4.9	S	36	NW	7	11	9	10	5.4	70
Oak Ridge CO	905	983.0	------	80	57	68.7	-7.1	90	22	48	1	1	0	--	--	4.42	.51	1.44	11	5	T	T	4.3	---	19	SW	11	6	13	11	5.9	--

See footnotes at end of table.

CLIMATOLOGICAL DATA

Table 2—Continued

JUNE 1955

State and station	Elevation (ground)	Station	Sea level	Pressure: Average maximum	Pressure: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	No. of days: Max. 90° F. or above	No. of days: Min. 32° F. or below	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No. of days: .01 inch or more	Precipitation: No. of days: With thunderstorms	Snow, Sleet, Hail: Total	Snow, Sleet, Hail: Max. depth on ground	Wind: Average hourly speed	Wind: Prevailing direction	Wind: Fastest mile: Speed	Wind: Fastest mile: Direction	Wind: Fastest mile: Date	No. of days (sunrise to sunset): Clear	Partly cloudy	Cloudy	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	Ft.	*Mb.*	*Mb.*	*°F.*	*°F.*	*°F.*	*°F.*	*°F.*		*°F.*		#	#	*°F.*	*%*	*In.*	*In.*	*In.*			*In.*	*In.*	*M. p. h.*		*M. p. h.*			0–3	4–7	8–10	*0–10*	*%*
TEXAS																																
Abilene	1759	951.6	1011.2	90	67	78.4	-1.4	101	25	53	11	21	0	61	59	4.71	1.92	2.05	10	10	T	0	14.3	SSE	58	S	29	14	14	2	3.7	82
Amarillo	3890	887.9	1010.8	86	58	71.7	-1.9	101	24	42	10	11	0	51	57	1.49	-1.76	.72	6	8	T	T	13.9	SSE	61	S	19	13	10	7	4.5	76
Austin	615	991.9	1013.2	91	68	79.6	-1.9	97	27+	57	10	23	0	66	68	2.61	-.59	1.31	8	8	T	0	10.2	SSE	42	NE	8	9	18	3	4.4	76
Brownsville	16	1010.5	1012.7	91	74	82.5	-.1	94	9+	66	12	22	0	71	72	.01	-3.35	.01	1	1	.0	0	13.6	SE	32	NE	10	8	20	2	4.7	84
Corpus Christi	40	1012.2	1013.1	92	73	82.4	1.4	97	8	61	10	26	0	71	72	.28	-2.60	.18	2	1	.0	0	12.5	ESE	40	NW	6	12	14	4	4.3	85
Dallas	487	995.6	1013.8	90	68	78.8	-3.1	97	27	55	11	17	0	63	63	4.63	1.18	1.50	8	9	T	0	12.1	SSE	49	W	8	12	15	3	4.1	80
Del Rio	1091	977.7	1011.1	95	71	83.0	.3	103	25	55	10	25	0	63	56	1.02	-1.40	.49	3	2	.0	0	12.8	---	49	NE	8	14	12	4	4.2	71
El Paso	3920	884.5	1008.9	93	67	79.0	-.4	103	8	56	3+	20	0	37	24	.18	-.44	.16	2	1	.0	0	13.2	W	49	NE	21	21	5	4	2.8	90
Fort Worth	544	993.2	1013.8	88	68	78.0	-3.4	96	27	55	11	13	0	64	65	4.99	1.60	1.89	8	10	T	0	10.9	S	*52	NW	8	12	15	3	4.1	--
Galveston CO	7	------	------	85	75	80.0	-1.5	88	27+	60	10	0	0	---	---	1.76	-1.59	.85	6	--	.0	0	11.0	---	35	NW	10	--	--	--	---	91
Galveston	5	1012.5	1014.7	86	75	80.2	-1.6	89	25+	60	10	0	0	72	79	1.51	-1.84	.65	6	5	.0	0	11.6	S	--	---	--	13	16	1	3.6	--
Houston CO	41	1009.1	------	89	72	80.3	-1.5	94	27	57	10	16	0	---	---	2.50	1.58	1.30	6	7	.0	0	9.0	---	28	N	10	8	20	2	4.8	88
Houston	50	1011.5	1013.9	90	69	79.4	-1.1	95	15+	57	10	15	0	67	70	1.56	-2.13	.79	7	4	.0	0	11.5	S	--	---	--	7	20	3	4.9	--
Laredo	500	995.9	1010.7	99	74	86.8	1.0	105	25	59	10	29	0	66	56	.79	-1.30	.51	2	2	.0	0	13.8	SE	*32	NE	10	13	13	4	4.2	--
Lubbock	3243	901.5	1010.3	90	61	75.8	-.6	102	24	47	10	19	0	55	56	2.30	-.23	.52	10	12	T	T	14.4	S	*63	NE	8	11	11	4	4.2	--
Midland	2854	913.6	1010.3	93	66	79.2	-.9	104	25	53	11	22	0	53	47	1.88	-.08	.97	9	7	.0	0	10.3	SSE	*40	NNE	8	17	9	4	3.3	--
Port Arthur	16	1013.2	1014.6	89	69	78.9	-1.2	94	27+	59	10+	15	0	69	75	4.47	-.31	1.89	8	10	.0	0	8.6	S	38	NW	8	11	17	2	4.4	81
San Angelo	1903	945.5	1011.4	92	68	80.1	-.5	102	25	53	10	23	0	58	51	3.06	1.24	2.68	6	6	T	T	12.5	S	*57	NNE	8	17	11	2	3.8	--
San Antonio	792	987.8	1012.8	93	70	81.4	-.6	98	8+	58	10+	26	0	65	63	2.88	-.32	1.72	6	6	.0	0	9.9	SSE	57	NE	8	11	16	3	4.2	80
Victoria	110	1008.8	1013.2	92	70	81.0	-2.1	97	8+	59	10	26	0	68	66	1.97	-1.27	.93	6	5	.0	0	10.8	---	%49	NNW	5	9	20	1	4.4	--
Waco	500	994.9	1013.2	90	68	78.8	-3.0	96	27	58	12	19	0	65	67	2.01	-1.18	.87	8	9	.0	0	12.4	S	--	---	--	11	16	3	4.4	--
Wichita Falls	1027	976.0	1012.1	89	66	77.6	-2.0	98	25+	51	10	17	0	62	61	4.94	1.54	1.67	8	8	.0	0	11.7	SE	*46	NW	3	16	12	2	4.2	--
UTAH																																
Milford	5028	843.2	1012.1	82	47	64.3	-1.5	97	22	35	3	7	0	---	---	.34	-.11	.21	6	3	T	0	----	---	--	---	--	18	6	6	3.7	--
Salt Lake City	4220	865.6	1011.4	80	52	66.3	-.8	97	22	42	2+	5	0	41	45	.95	.04	.42	5	2	.0	0	9.6	SSE	42	W	27	16	7	7	4.3	64
VERMONT																																
Burlington	331	997.5	1012.0	78	56	66.7	1.2	91	18	43	3	1	0	56	70	4.05	.48	2.57	10	8	.0	0	8.2	S	26	NW	22	5	12	13	6.6	66
VIRGINIA																																
Lynchburg	947	981.6	------	78	57	67.7	-5.1	89	22	48	1	0	0	---	---	4.92	1.04	1.94	10	5	.0	0	7.1	---	29	SW	12+	13	10	7	4.6	73
Norfolk	26	1012.9	1014.1	81	63	71.9	-2.8	93	22	54	4	2	0	60	70	2.47	-1.69	.85	13	7	.0	0	8.2	WSW	30	S	11	15	5	10	4.5	73
Richmond	162	1008.8	1014.5	81	59	70.1	-4.2	93	22	50	4+	3	0	59	71	3.06	-.81	.93	8	6	.0	0	7.3	W	29	S	23	11	12	7	4.8	65
Roanoke	1174	973.5	1015.2	80	56	68.0	-4.7	91	22+	46	1	3	0	55	67	3.70	.00	1.68	10	4	.0	0	5.6	W	--	---	--	11	7	12	5.4	--
WASHINGTON																																
Olympia	190	1010.5	1017.8	69	46	57.7	-1.2	97	9	35	19	1	0	45	68	.71	-.57	.41	11	1	.0	0	7.1	SW	*23	W	23+	5	4	21	7.6	--
Seattle CO	14	------	------	68	52	59.6	-2.2	100	9	46	14	1	0	---	---	1.66	.41	.45	12	0	.0	0	8.7	---	23	N	10+	6	3	21	7.2	45
Seattle	14	1016.9	1016.0	--	--	----	---	---	--	---	--	--	--	48	69	----	----	----	--	--	---	--	8.2	SSW	--	---	--	--	--	--	---	--
Seattle-Tacoma	379	1004.1	1016.3	67	49	58.0	-1.9	96	9	43	14+	1	0	47	73	1.27	-.03	.40	13	0	.0	0	12.4	SW	*28	SW	22	5	4	21	7.4	--
Spokane	2357	945.5	1013.8	75	50	62.7	1.3	96	21	40	1+	2	0	40	47	.80	-.37	.56	4	2	.0	0	8.3	SW	35	SW	22	9	10	11	5.5	69
Stampede Pass CO	3958	880.5	1019.1	55	40	47.5	-2.9	79	10	30	30	0	2	---	---	3.08	-.89	1.54	13	0	4.5	92	----	---	--	---	--	8	2	20	7.0	--
Tatoosh CO	101	1015.2	1018.4	56	47	51.6	-2.4	82	9	45	7+	0	0	48	89	4.82	2.24	1.94	16	0	.0	0	10.8	S	40	E	9	1	4	25	8.9	21
Walla Walla CO	949	978.3	1013.5	81	56	68.4	.5	97	11	46	1	7	0	---	---	.30	-.91	.18	4	0	.0	0	6.6	---	29	W	22	14	11	5	4.1	85
Yakima	1061	975.6	1014.4	81	50	65.4	.0	97	11	36	16	7	0	42	46	.41	-.18	.25	4	3	T	T	7.4	NNW	--	---	--	13	9	8	5.0	--
WEST VIRGINIA																																
Charleston	950	980.0	1015.2	77	54	65.8	-6.2	90	6	44	1	1	0	56	75	2.07	-1.86	.74	10	4	.0	0	6.2	SW	*23	SSW	11+	6	12	12	6.4	--
Elkins	1969	------	------	73	49	61.0	-5.5	86	6	38	2+	0	0	---	---	3.13	-2.13	.84	11	5	.0	0	4.8	WNW	*25	N	26	0	19	11	7.2	--
Huntington CO	565	------	------	80	56	68.1	-6.0	90	5+	48	1	5	0	---	---	3.83	-.51	.96	11	--	.0	0	----	---	--	---	--	--	--	--	---	--
Parkersburg	615	------	------	78	56	67.3	-5.1	90	30	46	2+	1	0	---	---	3.75	-.43	1.87	9	5	.0	0	4.6	---	26	NW	21	11	9	10	5.4	59
WISCONSIN																																
Green Bay	689	991.2	1013.9	76	54	64.9	.2	86	30	44	1	0	0	55	73	3.25	-.32	.81	11	8	T	0	7.9	S	34	SW	19	7	10	13	6.0	62
La Crosse	652	989.2	1013.5	77	57	67.1	-1.5	94	30	46	10	1	0	55	64	1.66	-2.21	.69	11	8	T	0	7.5	S	*29	WSW	20	7	11	12	5.9	--
Madison	857	979.3	1014.2*	77	54	65.5	-1.9	91	30	40	10	2	0	55	70	2.78	-1.24	.89	11	7	.0	0	8.8	S	32	W	23	9	7	14	6.2	75
Milwaukee	675	989.8	1014.6	75	56	65.2	.3	90	30	46	10	1	0	54	71	4.58	1.36	1.51	14	5	T	T	9.6	SE	33	SW	4	11	6	13	5.6	65
WYOMING																																
Casper	5322	836.8	1011.8	73	48	60.4	-1.6	88	21+	38	2	0	0	40	56	2.07	.59	.51	10	8	T	T	11.9	E	*33	NW	26	9	12	9	5.8	--
Cheyenne	6131	812.1	1012.7	70	46	58.1	-2.2	87	23+	35	4+	0	0	42	64	5.32	3.22	2.68	18	13	1.5	1	12.1	NW	56	NE	9+	4	13	13	6.4	49
Lander	5563	835.1	1012.8	73	47	60.2	-1.3	92	23	35	2	2	0	41	53	1.93	.58	.46	8	9	T	T	7.3	---	43	SW	26	10	10	10	5.6	68
Sheridan	3942	883.8	1014.1	73	49	60.9	-.5	89	21	42	1+	0	0	48	66	1.76	-.84	.49	13	11	T	T	8.9	NW	42	NW	2	6	11	13	6.3	55
PACIFIC AREA																																
Canton Island	9	1010.2	1010.7	87	78	82.6	-1.7	90	10	75	8+	1	0	73	76	.76	-2.04	.28	7	0	.0	0	----	---	--	---	--	12	11	7	4.9	--
Hilo	31	1016.9	1018.3	79	66	72.2	-2.2	82	30	64	3+	0	0	65	80	4.80	-1.95	.68	26	0	.0	0	6.6	WSW	*21	NE	28	0	5	25	8.7	28
Honolulu	7	1017.6	1018.3	81	70	75.8	-2.1	83	5+	65	6	0	0	63	65	.08	-.15	.04	4	0	.0	0	13.8	ENE	30	NE	23	4	20	6	6.3	60
Koror CO	94	1006.1	1009.8	87	74	80.7	-.6	89	10+	72	4+	0	0	76	86	17.81	5.36	4.13	28	8	.0	0	14.0	NE	29	NE	18	0	12	18	8.0	40
Lihue	115	1013.5	1018.8	81	70	75.1	-1.1	82	14+	65	8	0	0	66	75	.80	-.85	.19	17	0	.0	0	----	---	--	---	--	1	1	28	9.1	--
Ponape CO	112	1005.1	1010.5	86	73	79.5	-1.5	89	8+	69	24	0	0	75	87	15.60	-.77	2.06	28	4	.0	0	----	---	--	---	--	0	5	25	9.0	--
Truk (Moen Island)	8	1009.8	1010.3	86	76	81.2	.7	87	2+	72	15	0	0	76	85	11.76	-1.46	3.35	25	0	.0	0	13.2	E	--	---	--	15	11	4	4.4	--
Wake Island	11	1014.9	1015.2	86	76	80.6	-.7	87	24+	72	6	0	0	73	77	1.42	-.38	.27	20	0	.0	0	----	---	--	---	--	0	8	22	8.7	--
Yap CO	53	1008.1	1010.0	88	76	81.6	-.5	91	10+	71	29	3	0	76	83	11.18	.79	3.47	26	0	.0	0	----	---	--	---	--	0	7	23	8.5	--
Majuro	10	1009.5	1009.8	85	75	80.0	---	87	7+	70	10	0	0	75	85	14.30	----	2.02	25	3	.0	0	----	---	--	---	--	--	--	--	---	--
WEST INDIES																																
San Juan, P.R. CO	47	------	------	85	76	80.3	.8	91	9	74	16+	3	0	--	--	2.95	-2.21	.68	19	--	---	---	----	---	--	---	--	--	--	--	---	--
San Juan, P.R.	9	1013.5	1015.6	88	72	80.0	---	91	16+	70	25+	6	0	72	78	2.19	-----	.91	14	3	.0	0	8.8	ENE	26	E	5	6	14	10	5.7	82
ALASKA																																
Anchorage	92	1007.1	1012.4	58	44	51.2	-2.5	72	18	37	2	1	0	40	65	1.16	.29	.42	12	0	T	T	9.4	S	*30	S	4	1	5	24	8.7	44
Annette	110	1013.5	1017.4	58	45	51.5	-2.8	80	9	39	6+	5	0	45	81	8.37	3.68	2.37	12	0	T	0	10.8	SSE	*32	SE	3+	5	6	19	7.4	--
Barrow	22	1011.2	1011.8	36	29	32.3	-1.6	50	23	22	2	0	25	32	95	1.15	.87	.82	6	1	T	8	9.4	NE	31	W	16	0	6	24	9.0	--
Bethel	10	1009.1	1010.8	51	40	45.6	-7.0	62	17	33	5+	0	0	41	78	1.68	.48	.31	17	0	T	T	10.5	NW	*25	SW	12	1	1	28	9.3	--
Cordova	40	1012.2	1013.9	53	41	46.7	-2.6	61	23	29	6	0	2	---	---	4.30	.11	.79	19	0	.0	0	----	---	--	---	--	0	2	28	9.4	--
Fairbanks	436	991.2	1008.3	66	45	55.6	-3.7	77	23	35	3	13	0	43	65	3.52	2.15	1.52	13	1	.0	0	7.1	SW	*25	WSW	12	1	7	22	8.1	34
Juneau	15	1014.6	1015.3	59	42	50.5	-3.1	76	22	31	7	5	1	42	73	2.22	-.96	.44	19	0	.0	0	8.6	ESE	35	SE	10	2	2	26	8.5	--
Kotzebue	10	1009.5	1010.0	46	35	40.5	-2.8	63	28	26	17	0	13	37	86	.72	.23	.24	10	0	T	T	11.9	WSW	*35	WSW	11	1	8	21	8.3	--
McGrath	334	997.6	1010.2	60	42	50.8	-4.9	77	18	34	14+	2	0	41	68	.64	-1.42	.22	11	1	T	T	6.1	S	*20	SW	12	0	3	27	8.6	14
Nome	13	1009.5	1010.1	47	37	42.0	-3.8	56	10	29	5	0	5	38	85	1.27	.19	.39	13	0	T	T	10.2	SE	26	SW	11+	0	7	23	8.6	--
Northway	1713	------	------	63	43	52.8	-2.9	76	10+	32	3+	7	2	---	---	1.63	-.37	.59	14	2	T	T	----	---	--	---	--	0	8	22	8.3	--
St. Paul Island	22	1010.2	1011.4	42	36	38.9	-2.6	47	29	30	6+	0	0	37	94	.52	-.79	.30	8	0	T	T	----	---	--	---	--	0	0	30	9.8	--
Yakutat	28	1014.2	1015.2	53	40	46.6	-2.9	67	10	30	7	0	1	43	86	5.43	.47	1.41	18	0	T	0	8.9	ESE	*40	SE	10	0	6	24	8.8	--

Data from airport unless otherwise specified. CO indicates data from city office.
* Date entered in column "Fastest Mile" is the fastest mile observed. This station is not equipped with automatic recording wind instrument.
+ And also on a later date or dates.
% Peak gust.
a Maximum hourly average.
Number of days Maximum 70° or above for Alaskan stations.

MONTHLY AND SEASONAL HEATING DEGREE DAYS

(Base 65°)

Table 3A — 1954 - 1955

State and Station	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Total for Season	Normals July-June
ALABAMA														
Birmingham	0	0	1	157	418	652	659	461	286	50	2	0	2686	2780
Mobile	0	0	0	76	258	424	442	258	169	20	0	0	1647	1612
Montgomery (CO)	0	0	0											1954
Montgomery	0	0	0	107	360	559	573	375	210	34	0	0	2218	2137
ARIZONA														
Flagstaff	11	112	210	503	756	1094	1322	1183	923	743	517	270	7644	7525
Phoenix (CO)	0	0	0	12	29	316	487	360	111	35	3	0	1353	1492
Phoenix	0	0	0	14	39	336	500	390	117	37	3	0	1436	1698
Prescott	0	0	11	172	461	829	996	825	608	447	182	47	4578	4533
Tucson	0	0	0	13	91	364	560	445	175	74	13	0	1735	1776
Winslow	0	0	0	195	542	967	1023	890	607	404	142	30	4800	4702
Yuma	0	0	0	2	13	263	398	282	67	22	2	0	1049	951
ARKANSAS														
Ft. Smith	0	0	1	148	394	689	739	624	419	82	0	6	3102	3188
Little Rock	0	0	0	142	362	635	690	570	388	59	0	0	2846	2982
Texarkana	0	0	0	111	321	519	613	493	300	59	0	1	2417	2362
CALIFORNIA														
Bakersfield	0	0	0	40	311	574	625	412	242	189	49	0	2442	2115
Bishop	0	4	27	261	490	854	1164	757	596	447	223	30	4853	4222
Blue Canyon	9	129	169	341	514	825	971	839	809	844	425	208	6083	5719
Burbank	0	0	1	63	102	302	433	296	197	170	115	25	1704	1808
Eureka (CO)	284	249	217	332	340	514	638	567	588	533	455	353	5070	4632
Fresno	0	0	0	82	372	650	716	495	337	300	87	5	3044	2532
Los Angeles (CO)	0	0	0	30	81	213	345	223	142	125	88	14	1261	1451
Los Angeles	0	0	3	79	106	228	397	268	178	184	124	36	1603	2015
Mt. Shasta (CO)	27	132	238	457	629	967	1050	833	785	754	359	166	6397	5913
Oakland	65	101	62	132	282	509	638	461	386	415	232	183	3466	3163
Red Bluff	0	5	6	88	364	672	684	485	336	355	53	4	3032	2546
Sacramento (CO)	0	0	4	77	378	644	680	453	319	308	79	19	2961	2600
Sacramento	0	0	7	107	409	658	707	491	338	335	82	18	3142	2822
Sandberg (CO)	0	40	34	196	386	735	917	720	582	559	364	130	4663	4243
San Diego	0	0	0	35	64	207	336	260	163	158	103	15	1341	1574
San Francisco (CO)	185	222	118	114	245	462	514	350	311	374	259	239	3393	3069
San Francisco	110	120	104	206	339	529	616	450	383	380	236	180	3653	3421
San Jose	4	22	32	106	276	477	572	416	313	347	149	56	2770	2410
Santa Maria	63	94	121	202	208	398	558	449	365	395	316	225	3394	2934
COLORADO														
Alamosa	23	114	232	547	927	1417	1458	1325	1039	764	484	202	8532	8659
Colorado Springs	1	7	69	440	676	959	1165	1074	904	522	270	122	6209	6254
Denver	0	4	71	395	616	934	1163	1054	878	444	203	105	5867	6132
Grand Junction	0	0	35	314	669	1195	1265	1213	816	475	163	42	6187	5796
Pueblo	0	0	28	341	609	905	1086	1038	774	377	139	40	5337	5709
CONNECTICUT														
Bridgeport	0	1	77	238	608	939	1102	922	810	437	117	37	5288	5896
Hartford	1	16	140	300	694	1031	1198	961	874	449	129	68	5861	6139
New Haven	6	4	116	275	651	963	1122	938	856	473	180	53	5637	6026
DELAWARE														
Wilmington	0	0	36	249	630	920	1031	857	660	300	83	30	4796	4910
DISTRICT OF COLUMBIA														
Washington (CO)	0	0	8	218	567	841	909	747	526	197	34	15	4062	4258
Washington	0	0	8	209	587	857	910	756	549	209	47	16	4148	4333
FLORIDA														
Apalachicola (CO)	0	0	0	40	187	366	357	223	133	10	0	0	1316	1307
Daytona Beach	0	0	0	32	146	301	274	149	117	7	0	0	1026	868
Fort Myers	0	0	0	1	32	163	151	71	32	0	0	0	450	405
Jacksonville (CO)	0	0	0	50	186	337	327	196	123	8	0	0	1227	1113
Jacksonville	0	0	0	55	205	376	370	198	129	6	0	0	1339	1243
Key West (CO)	0	0	0	0	0	25	32	20	0	0	0	0	77	77
Miami (CO)	0	0	0	0	4	69	87	39	15	0	0	0	214	173
Miami	0	0	0	0	0	82	75	33	9	0	0	0	199	178
Miami Beach	0	0	0	0	0	43	50	21	4	0	0	0	118	123
Orlando	0	0	0	15	104	254	218	110	79	3	0	0	783	650
Pensacola (CO)	0	0	0	60	214	379	405	236	162	14	0	0	1470	1435
Tallahassee	0	0	0	76	261	459	421	232	168	11	0	0	1628	1519
Tampa	0	0	0	16	93	233	210	108	74	2	0	0	736	674
West Palm Beach	0	0	0	0	8	117	93	39	15	0	0	0	272	248
GEORGIA														
Albany	0													1763
Athens	0	0	0	151	478	655	665	492	317	53	1	1	2813	2800
Atlanta	0	0	0	145	460	652	654	480	304	56	0	0	2751	2826
Augusta	0	0	0	143	419	594	639	412	264	65	1	0	2537	2138
Columbus	0	0	0	130	393	579	607	385	230	33	0	1	2358	2396
Macon	0	0	0	114	360	532	555	353	214	30	0	0	2158	2049
Rome	0	0	0	209	525	750	761	546	364	77	5	0	3237	3138
Savannah	0	0	0	107	328	511	525	324	185	40	0	0	2020	1710
Valdosta	0													1525
IDAHO														
Boise	13	39	145	431	636	1062	1279	1052	887	621	353	69	6587	5890
Lewiston	7	38	131	492	630	984	1031	870	912	593	352	59	6099	5483
Pocatello	8	45	181	568	739	1360	1483	1225	1076	710	403	156	7954	6976
ILLINOIS														
Cairo (CO)	0	0	3	210	466	768	838	681	492	73	2	9	3542	3756
Chicago (CO)	0	0	29	302	629	982	1193	980	848	294	139	58	5454	
Chicago	0	0	31	329	666	1020	1238	1007	854	239	112	47	5543	6310
Chicago University	0	2	35	334	665	1018	1224	996	880	317	167	68	5706	
Moline	0	2	58	395	722	1108	1329	1107	891	236	100	44	5992	6364
Peoria	0	0	36	344	689	1046	1248	1030	836	190	90	41	5550	6087
Springfield	0	3	33	332	658	967	1143	933	762	167	75	35	5108	5693
INDIANA														
Evansville	0	2	16	289	567	863	978	770	586	157	38	29	4295	4360
Ft. Wayne	0	8	44	380	720	1060	1216	997	840	264	131	42	5702	6287
Indianapolis (CO)	0	0												5134
Indianapolis	0	0	30	343	682	1010	1156	911	751	235	101	51	5270	5611
South Bend	2	15	62	394	725	1097	1266	1063	893	323	184	54	6078	6524
Terre Haute	0													5366
IOWA														
Burlington	0	0	47	376	682	1070	1271	1060	837	219	106	39	5707	6101
Des Moines	0	3	48	401	669	1094	1337	1195	902	236	81	44	6010	6446
Dubuque	0	10	101	467	795	1228	1442	1230	1023	334	160	67	6857	7271
Keokuk (CO)	0		34	313	607	974	1165	1011	766	166	64	38		
Sioux City	0	1	65	444	661	1144	1321	1336	985	220	61	46	6284	7012
KANSAS														
Concordia (CO)	0	0	18	291	523	910	1078	1105	767	177	26	36	4931	5323

Data from airport unless otherwise specified.
CO indicates data from city office.

MONTHLY AND SEASONAL HEATING DEGREE DAYS

Table 3A-Continued

(Base 65°)

1954 - 1955

State and Station	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Total for Season	Normals July-June
KANSAS (Cont'd.)														
Dodge City	0	0	15	299	498	853	974	976	703	214	54	29	4615	5058
Goodland	1	0	51	451	670	1010	1197	1085	883	393	144	97	5982	6367
Topeka (CO)	0	0	13	255	487	909	1024	1011	702	129	36	21	4587	4919
Topeka	0	0	13	258	525	928	1043	1024	709	150	45	22	4717	5209
Wichita	0	0	3	223	467	854	930	911	654	147	14	20	4223	4571
KENTUCKY														
Lexington	0	0	19	301	606	916	1014	795	569	196	58	34	4508	4979
Louisville (CO)	0	0	5	233	511	839								4279
Louisville	0	0	13	280	559	862	966	760	542	134	32	20	4168	4439
Pikeville (CO)	0	0	6	225	557	829	882	672	440	122	10	18	3761	
LOUISIANA														
Baton Rouge	0	0	0	69	226	374	427	276	165	22	0	0	1559	1595
Lake Charles	0	0	0	45	186	306	388	272	163	20	0	0	1380	1543
New Orleans (CO)	0	0	9	33	150	270	330	191	127	15	0	0	1125	1175
New Orleans	0	0	3	53	193	321	365	206	142	13	0	0	1296	1317
Shreveport	0	0	0	81	285	437	528	428	249	34	0	0	2042	2117
MAINE														
Caribou	121	174	381	636	963	1422	1664	1393	1388	813	468	162	9585	10173
Greenville (CO)	87	135	356	534	919	1379	1633	1324	1291	761	366	136	8921	
Portland	34	72	255	424	785	1160	1315	1065	1065	629	289	124	7217	7681
MARYLAND														
Baltimore (CO)	0	0	2	177	529	845	926	763	549	203	38	14	4046	4203
Baltimore	0	0	25	259	641	924	1005	849	620	274	76	27	4700	4787
Frederick	0	0	36	299	696	954	1039	912	660	295	101	40	5032	4854
MASSACHUSETTS														
Blue Hill Obs.	7	30	183	335	710	1067	1252	1015	963	588	210	128	6488	
Boston	0	11	107	248	612	941	1127	917	841	469	133	73	5479	5791
Nantucket	12	9	133	256	568	870	1078	904	863	633	358	158	5842	6102
Pittsfield	41	97	246	416	826	1223	1411	1123	1054	555	240	115	7347	7694
MICHIGAN														
Alpena (CO)	47	71	205	489	770	1233	1331	1216	1162	562	321	93	7500	8073
Detroit	10	5	71	350	705	1088	1196	1018	900	311	154	27	5835	6404
Detroit (Willow Run)	11	7	67	358	722	1100	1223	1031	900	293	139	30	5881	6469
East Lansing (CO)		15	84	393	735	1139	1248	1071	943	307	167	33	6135	
Escanaba (CO)	39	69	255	556	793	1195	1400	1293	1226	580	349	100	7855	8657
Grand Rapids (CO)	7	13	85	374	681	1077	1207	1048	939	301	161	34	5927	6474
Grand Rapids	13	24	114	413	746	1133	1259	1107	982	358	197	44	6390	7075
Lansing	17													6982
Marquette (CO)	76	72	285	596	808	1213	1361	1248	1241	542	351	125	7918	8529
Muskegon	18	27	111	423	729	1099	1237	1105	1000	404	236	64	6453	7089
Sault Ste. Marie	120	110	322	622	858	1351	1489	1357	1379	611	370	108	8697	9475
MINNESOTA														
Duluth (CO)	83	86	326	703	962	1378	1660	1491	1474	597	416	151	9327	9574
Duluth	56	88	348	714	984	1411	1704	1533	1500	574	368	127	9407	9937
International Falls	52	130	404	745	1053	1501	1925	1693	1674	554	343	110	10184	10600
Minneapolis	1	0	158	530	795	1281	1571	1411	1211	328	124	41	7451	7853
Rochester	0	20	180	561	839	1310	1553	1391	1171	392	175	68	7660	8095
St. Cloud	20	31	263	641	891	1349	1701	1551	1346	424	192	70	8479	8893
MISSISSIPPI														
Jackson	0	0	0	116	321	505	577	425	242	45	0	0	2231	2202
Meridian	0	0	0	135	350	564	1616	417	239	50	0	0	3371	2333
Vicksburg (CO)	0	0	0	96	263	437	520	404	224	35	0	0	1979	2000
MISSOURI														
Columbia	0	0	16	286	561	906	1024	890	663	121	54	29	4550	5113
Kansas City	0	0	7	247	478	864	1002	931	657	108	36	17	4347	4888
St. Joseph	0	0	21	291	566	964	1152	1101	749	157	50	26	5077	5336
St. Louis (CO)	0	2	11	258	521	850	954	794	611	88	20	22	4131	4469
St. Louis	0	2	14	281	568	869	983	808	622	107	28	26	4308	4699
Springfield	0	0	11	268	538	871	949	829	620	140	28	38	4292	4693
MONTANA														
Billings	3	11	174	518	626	944	1160	1243	1199	605	320	115	6918	7106
Glasgow (CO)	20	19	252	587	708	1121	1616	1494	1333	550	334	92	8126	8690
Great Falls	18	59	280	588	604	937	1204	1211	1297	728	475	162	7563	7555
Havre (CO)	20	28	239	566	676	1018	1466	1318	1279	711	370	120	7811	8213
Helena	14	82	285	687	772	1295	1378	1234	1357	767	480	197	8548	8250
Kalispell	93	140	356	744	805	1132	1258	1228	1286	754	559	194	8549	8055
Miles City	5	4	179	543	699	1095	1337	1332	1169	510	276	102	7251	7850
Missoula	37	122	300	677	790	1220	1316	1186	1221	750	528	199	8346	7873
NEBRASKA														
Grand Island	0	3	50	423	638	1008	1278	1253	924	258	81	73	5989	6311
Lincoln (CO)	0	0	32	352	589	974	1228	1182	839	188	45	42	5471	5865
Norfolk	0	3	68	451	668	1088	1298	1314	992	253	89	65	6289	7065
North Platte	0	2	77	498	737	1065	1378	1254	950	371	140	108	6580	6546
Omaha	0	0	36	359	575	1025	1242	1230	880	180	55	40	5622	6160
Scottsbluff	3	0	79	498	737	997	1392	1153	1006	514	199	123	6701	6841
Valentine (CO)	1	3	114	532	691	1057	1271	1324	1041	375	144	119	6672	7075
NEVADA														
Elko	10	88	275	591	786	1255	1603	1276	952	734	485	161	8216	7335
Ely	8	82	253	580	781	1208	1557	1313	1034	765	525	219	8325	7443
Las Vegas	0	0	0	63	229	649	733	591	336	168	40	2	2811	2425
Reno	9	83	217	470	700	1007	1238	916	808	702	355	124	6629	6036
Tonopah	0	17	73	361	607	1042	1505	1068	764	611	329	76	6453	5813
Winnemucca	6	79	260	539	766	1175	1456	1056	855	709	402	126	7429	6369
NEW HAMPSHIRE														
Concord	19	68	226	418	802	1192	1357	1091	1031	578	216	89	7087	7612
Mt. Washington	611	663	797	990	1343	1662	1866	1524	1708	1130	826	589	13709	
NEW JERSEY														
Atlantic City (CO)	0	0	16	177	539	857	976	849	658	402	160	40	4674	4741
Newark	0	0	53	234	601	916	1055	857	723	346	79	34	4898	5252
Trenton (CO)	0	0	45	244	611	915	1057	843	703	323	79	36	4856	5068
NEW MEXICO														
Albuquerque	0	0	3	151	483	889	961	840	538	292	90	2	4249	4389
Clayton	0	0	31	314	553	826	973	935	719	398	177	54	4980	5138
Roswell	0	0	0	170	437	737	807	663	418	149	13	2	3396	3424
NEW YORK														
Albany	14	26	157	355	752	1142	1351	1128	982	455	155	41	6558	6962
Binghamton	32	48	191	412	833	1226	1400	1145	1030	491	242	89	7139	7537
Buffalo	7	30	132	357	693	1117	1240	1032	959	414	206	37	6224	6838
New York (CO)	0	0	44	213	569	898	1064	841	733	362	100	41	4865	5050
New York	0	0	30	186	537	878	1035	831	703	347	68	26	4641	4989
Rochester	9	37	157	359	701	1152	1282	1092	984	420	205	35	6433	6863

Data from airport unless otherwise specified.
CO indicates data from city office.

MONTHLY AND SEASONAL HEATING DEGREE DAYS

Table 3A-Continued (Base 65°) 1954 - 1955

State and Station	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Total for Season	Normals July-June
NEW YORK (Cont'd.)														
Schenectady	2	22	149	330	716	1113	1316	1073	940	438	127	38	6264	
Syracuse	4	34	138	331	717	1152	1354	1099	970	400	193	22	6414	6520
NORTH CAROLINA														
Asheville (CO)	0	0	14	297	650	857	867	668	491	182	32	46	4104	4072
Asheville	0	0	28	334	708	896	913	713	514	225	55	57	4443	
Charlotte	0	0	0	173	492	713	731	532	356	84	0	1	3082	3205
Greensboro	0	0	4	230	607	830	851	655	452	136	20	10	3795	3810
Hatteras (CO)	0	0	0	58	269	566	649	549	291	114	27	0	2523	2392
Raleigh	0	0	1	201	530	767	802	590	372	109	17	3	3392	3369
Wilmington	0	0	0	138	348	618	635	473	241	70	9	0	2532	2323
Winston-Salem	0	0	1	215	588	812	814	647	438	127	21	9	3672	3721
NORTH DAKOTA														
Bismarck	23	17	251	626	850	1237	1546	1586	1283	475	211	119	8224	9033
Devils Lake (CO)	28	58	331	658	944	1356	1770	1671	1564	509	303	119	9311	9940
Fargo	16	21	246	619	906	1399	1713	1655	1487	424	195	75	8756	9274
Grand Forks	21	38	296	657	973	1467	1829	1715	1637	478	248	83	9442	
Pembina	22	8	258	564	891	1429	1909	1599	1735	474	228	74	9191	
Williston (CO)	36	20	304	603	776	1171	1573	1551	1359	529	297	129	8348	9088
OHIO														
Akron	11	11	79	393	736	1099	1241	1006	858	330	171	76	6011	6203
Cincinnati (CO)	0	0	5	256	540	854	967	748	553	144	36	14	4117	4532
Cincinnati	0	2	27	328	634	955	1069	835	633	203	73	41	4800	5195
Cleveland (CO)	2	0	38	295	619	957	1126	940						5717
Cleveland	3	2	45	328	663	1014	1173	950	812	268	126	35	5419	6006
Columbus	0	4	33	346	668	1008	1127	914	728	243	105	40	5216	5615
Dayton	0	7	31	340	680	1021	1140	929	742	237	91	37	5255	5597
Sandusky (CO)	0	0	28	306	670	1002	1156	952	805	254	129	21	5323	5859
Toledo	7	6	58	374	717	1072	1213	1004	869	288	145	34	5787	6394
Youngstown	15	22	90	374	743	1105	1251	1011	871	335	190	70	6077	6172
OKLAHOMA														
Oklahoma City	0	0	0	153	392	724	807	698	491	117	5	15	3402	3644
Tulsa	0	0	0	135	367	690	780	665	461	88	0	5	3191	3584
OREGON														
Astoria	219	158	185	373	426	659	737	658	728	637	482	293	5555	4995
Burns (CO)	33	118	259	553	707	1182	1352	1105	965	791	457	142	7664	6918
Eugene	74	87	175	434	457	746	802	693	706	598	375	162	5309	4779
Meacham	128	240	361	632	721	1122	1198	1085	1165	915	698	288	8553	7888
Medford	2	24	127	347	564	826	891	742	643	574	271	79	5090	4547
Pendleton	11	24	113	449	550	932	960	802	804	559	314	57	5575	5204
Portland (CO)	44	41	97	285	397	691	731	641	686	517	316	127	4573	4143
Portland	63	57	142	365	452	741	777	681	724	552	368	152	5074	4632
Roseburg	40	46	167	413	484	750	785	692	676	571	332	137	5093	
Salem	74	65	174	415	472	767	793	692	724	586	367	171	5300	4574
Sexton Summit (CO)	119	250	295	439	597	892	992	894	903	868	536	284	7069	6217
PENNSYLVANIA														
Allentown	0	5	86	317	723	1023	1170	957	804	361	118	49	5613	5886
Harrisburg	0	0	40	281	670	973	1065	914	705	291	80	29	5048	5258
Philadelphia (CO)	0	0	18	198	554	857	972	788	632	285	50	25	4379	4523
Philadelphia	0	0	27	216	583	889	996	803	632	272	61	32	4511	4866
Pittsburgh (CO)	0	1	25	298	615	952	1051	829	656	202	88	37	4754	5048
Pittsburgh	8	9	54	358	697	1066	1171	933	749	269	140	73	5527	5905
Reading (CO)	0	0	36	252	630	924	1047	857	688	277	62	24	4797	5060
Scranton (CO)	3	11	101	338	702	1054	1225	987	844	*362	170	59	5856	6047
Williamsport	1	8	82	327	724	1042	1180	987	793	333	115	36	5628	5898
RHODE ISLAND														
Block Island	5	4	94	229	572	889	1066	904	843	564	280	111	5561	5843
Providence	6	13	118	284	658	976	1139	931	861	481	185	87	5739	6125
SOUTH CAROLINA														
Charleston (CO)	0	0	0	68	254	468	472	360	169	31	0	0	1822	1769
Charleston	0	0	0	106	319	522	531	359	197	52	0	1	2087	1973
Columbia	0	0	0	137	438	630	647	444	261	47	1	0	2605	2435
Florence	0	0	0	127	380	615	616	438	250	50	0	0	2476	2507
Greenville	0	0	0	166	510	728	689	545	377	77	9	6	3107	3060
Spartanburg	0	0	0	165	510	715	694	545	373	80	5	3	3090	3044
SOUTH DAKOTA														
Huron	1	0	112	558	761	1321	1449	1489	1130	311	117	71	7320	7902
Pierre	0	0	105	541	707	1189	1312	1423	1099	330	5	81	6912	
Rapid City	1	0	110	562	665	1005	1266	1274	1119	451	203	140	6796	7535
Sioux Falls	0	1	117	548	745	1299	1420	1452	1094	309	112	74	7171	7848
TENNESSEE														
Bristol	0	0	10	286	622	883	945	692	522	186	19	28	4193	4148
Chattanooga	0	0	3	204	527	761	968	550	370	80	6	1	3470	3384
Knoxville	0	0	1	215	563	813	808	600	404	109	8	9	3530	3590
Memphis	0	0	0	164	431	670	720	581	398	64	0	0	3028	3137
Nashville	0	0	4	226	498	768	832	652	448	91	5	6	3530	3513
TEXAS														
Abilene	0	0	0	99	275	482	591	471	275	72	0	4	2269	2657
Amarillo	0	0	0	202	428	698	841	761	531	204	66	27	3758	4345
Austin	0	0	0	40	152	270	821	324	192	19	0	0	1818	1713
Brownsville	0	0	0	0	17	87	112	110	66	0	0	0	392	617
Corpus Christi	0	0	0	10	55	152	214	176	114	1	0	0	722	1011
Dallas	0	0	0	78	263	461	565	451	276	52	0	0	2146	2272
Del Rio	0	0	0	34	169	297	434	264	133	7	0	0	1338	1407
El Paso	0	0	0	46	308	580	696	543	284	64	2	0	2523	2641
Ft. Worth	0	0	0	77	276	464	580	455	284	57	0	0	2193	2361
Galveston (CO)	0	0	0	19	80	192	301	247	142	9	0	0	990	1211
Galveston	0	0	0	23	95	206	307	253	145	7	0	0	1036	1233
Houston (CO)	0	0	0	30	119	216	336	258	157	18	0	0	1134	1276
Houston	0	0	0	36	151	260	347	259	162	15	0	0	1230	1388
Laredo	0	0	0	6	48	151	259	181	96	3	0	0	744	781
Lubbock	0	0	0	188	424	683	779	696	453	157	31	14	3425	3587
Midland	0	0	0	105	319	517	678	504	277	69	3	3	2475	
Port Arthur	0	0	0	47	178	287	365	271	165	26	0	0	1339	1517
San Angelo	0	0	0	82	279	422	568	417	243	54	0	0	2065	2107
San Antonio	0	0	0	29	142	235	376	263	168	13	0	0	1226	1579
Victoria	0	0	0	19	87	206	296	220	136	5	0	0	969	1126
Waco	0	0	0	61	228	389	508	387	231	30	0	0	1834	2025
Wichita Falls	0	0	0	92	290	573	662	526	338	84	0	8	2573	3025
UTAH														
Milford	0	2	94	418	768	1138	1405	1285	832	590	307	83	6922	6445
Salt Lake City (CO)	0													5463
Salt Lake City	2	5	93	399	622	1070	1353	1142	871	572	257	85	6471	5866
VERMONT														
Burlington	27	57	224	427	799	1290	1509	1252	1126	558	187	44	7500	7865

Data from airport unless otherwise specified.
CO indicates data from city office.

MONTHLY AND SEASONAL HEATING DEGREE DAYS

Table 3A-Continued (Base 65°) 1954 - 1955

State and Station	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Total for Season	Normals July-June
VIRGINIA														
Lynchburg	0	0	9	256	630	857	1913	711	504	176	50	25	5131	4153
Norfolk	0	0	4	145	442	727	820	662	388	171	58	7	3424	3454
Richmond	0	0	5	220	561	826	898	690	450	155	67	12	3884	3955
Roanoke	0	0	14	268	651	865	915	725	506	167	41	28	4180	4152
WASHINGTON														
Ellensburg	57	64												6542
Olympia	165	166	209	484	520	793	810	752	799	633	426	230	5987	5501
Seattle (CO)	87	92	129	349	404	845	693	657	721	525	363	180	4845	4438
Seattle-Tacoma	147	130	182	440	474	744	793	745	795	605	438	221	5714	5275
Spokane	46	72	226	574	696	1072	1173	1033	1041	724	478	129	7264	6852
Stampede Pass (CO)	393	447	464	739	855	1215	1213	1144	1274	1026	883	519	10172	9149
Tatoosh Island (CO)	324	310	228	397	415	621	680	661	774	640	530	398	5978	5724
Walla Walla (CO)	5	7	77	389	464	891	948	752	748	503	281	36	5101	4848
Yakima	43	51	166	535	635	1033	1096	843	858	631	332	73	6298	5845
WEST VIRGINIA														
Charleston	0	5	24	305	636	905	987	761	548	205	59	59	4494	4417
Elkins	12	22	84	430	774	1078	1192	878	714	345	179	132	5840	5773
Huntington (CO)	0	0	12	263	593	871	943	734	517	171	38	24	4166	4073
Parkersburg (CO)	0	1	24	306	630	943	1018	805	614	207	63	207	4818	4750
Petersburg (CO)	0													4966
WISCONSIN														
Green Bay	21	55	204	536	847	1288	1526	1335	1176	479	267	84	7798	8259
La Crosse	0	9	129	491	803	1253	1476	1305	1123	326	133	47	7095	7650
Madison (CO)	1	10	109	430	782	1211	1421	1220	1067	331	159	66	6807	7300
Madison	0	14	122	452	806	1267	1422	1235	1061	348	177	72	6976	7417
Milwaukee	9	12	92	395	736	1137	1335	1122	1021	423	229	82	6593	7205
WYOMING														
Casper	0	4	113	580	738	1085	1317	1247	1209	644	307	170	7414	7638
Cheyenne	11	14	132	535	736	1001	1236	1165	1116	659	359	224	7188	7562
Lander	4	19	138	609	772	1214	1299	1290	1199	706	319	174	7743	8303
Sheridan	0	12	168	589	693	1114	1253	1260	1298	629	342	144	7502	7903
ALASKA														
Anchorage	215	269	490	775	1112	1825	1444	1384	1292	1012	647	407	10872	10789
Annette	345	159	310	577	568	879	839	840	979	733	617	399	7245	7096
Barrow	791	566	871	1360	1939	2502	2453	2563	2594	2003	1513	974	20129	19994
Bethel	331	407	593	911	1266	2171	1560	1816	1589	1402	784	573	13403	12880
Cordova	369	368	465	703	874	1392	1062	1036	1130	946	735	542	9622	9615
Fairbanks	208	263	663	1040	1567	2688	2114	2166	1699	1297	583	276	14564	14158
Juneau	326	273	467	681	792	1136	1016	994	1146	802	681	429	8743	8888
Kotzebue	472	412	740	1168	1631	2554	1939	2379	2065	1731	1098	727	16916	16151
McGrath	251	341	658	1035	1582	2610	2041	2071	1632	1428	671	419	14740	14390
Nome	521	489	686	1014	1341	2179	1599	1980	1843	1583	894	683	14792	14086
Northway	262	367	750	1304	1623	2700	2405	2139	1808	1240	762	360	15720	15506
St. Paul	633	556	594	892	925	1228	1192	1095	1268	1200	999	777	11359	10839
Yakutat	403	373	469	702	814	1239	1043	1022	1110	942	788	546	9451	9354

Data from airport unless otherwise specified. CO indicates data from city office.
* Changed to airport data April 18.

Note: Table 3, Heating Degree Days, is being discontinued in the June issues of this publication, the data appearing therein being shown in the last three columns of the above Table 3A.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

Table 4

June 1955

Place	Date	Time	Length of path, miles	Width of path, yards	Number of persons		Estimated damage		Character of storm	Remarks
					Killed	Injured	Property (exclusive of crops)	Crops		
Iowa, north-central portion	1	Morning					$50,000	Minor	Wind, rain, and hail	Flooded lowlands, broke windows, and damaged buildings and utility lines.
Maeser area, Uintah County, Utah	1	12:25 p.m.			0	0	1,200		Tornado	Funnel cloud observed moving northeastward. Tree tops sheared off. Tomatoes had to be replanted.
Hale County, Texas	1	1:30 p.m.							Hail, wind, rain, and electrical	Hail damage to crops near Petersburg. Wind damaged residences and telephone lines. Area affected included Plainview, Providence, Hale Center, Petersburg, and Edmonson. Storm moved southward.
Atlanta (northeastern portion), DeKalb County, Ga.	1	2:00 p.m.	Short	Narrow	0	0	400	0	Whirlwind	Whirlwind or updraft wind created by powerful wind gusts over small area surrounded by buildings. Suction or updraft wind struck locally, lifted heavy aluminum boat about 60 feet in air, then dropped it on house roof and back porch; porch partially demolished and hole knocked in roof. Smaller objects picked up and blown away, and roofs of adjacent homes slightly damaged by high wind. Storm moved southwestward.
West Palm Beach (8 miles southeast of), Fla.	1	2:10 p.m.			0	0	0	0	Waterspout	Reported by aircraft pilot as being about 5 miles offshore.
Kiowa County, Kans.	1	2:40 p.m.							Rain, hail, wind, and electrical	Torrential rain in central Kiowa County of about 3 hours, duration with amounts estimated up to 7 inches. Considerable hail accompanied rain with stones size of softballs reported southeast of Mullinville. Hail damage not widespread, but 100 percent wheat losses locally.
Darrouzett, Lipscomb County, Tex.	1	4:10 p.m.	3		0	0	0	0	Tornado	Tornado not touching ground moved northeastward over town.
Slapout (near), Beaver County, Okla.	1	4-5 p.m.	15	100	0	0	0	0	Tornadoes (suspected), wind, and rain	Funnel clouds moving northeastward observed.
Shattuck (near), Ellis County, Okla.	1	4-5 p.m.			0	0	0	0	Tornadoes (suspected), wind, and rain	2 funnels aloft observed northwest of Shattuck. Storm moved northeastward.
Bremer County (northeastern portion), Iowa	1	4:30 p.m.	4				10,000	Minor	Wind, rain, and hail	Damaged buildings and utility lines. Storm moving eastward cut swath through Summer and Tripoli, with most of damage in vicinity of Tripoli.
Pelican Key, (6 miles southwest of Everglades), Collier County, Fla.	1	4:45 p.m.	3	35	0	0	0	0	Tornado	Path over uninhabited islands and bays. Tornado moved west-northwestward.
Hollis, Harmon County, Okla.	1	5:30-6 p.m.	10	400	0	2	3,000	Minor	Tornado, wind, rain and electrical	Funnel cloud moving northeastward observed striking ground in southeastern and northeastern sections of the city.
Washita County, Okla.	1	5:30-6:30 p.m.			0	0	0	0	Tornado (suspected), wind, and rain	Funnel cloud moving northeastward, reported by newspaper, between Elk City and Sentinel.
Northern Beadle and southern Clark Counties, S. Dak.	1	6-7:00 p.m.	30				15,000	$20,000	Wind, hail, rain, and electrical	Damage confined to 9 farms. Most hail damage in Clark County. Storm moved northeastward.
Granite, Greer County, Okla.	1	6:30-7:30 p.m.	5	200	0	0	1,500	Minor	Tornado, wind, and rain	Funnel cloud moving northeastward observed striking ground.
Burdette, Hand County, S.Dak.	1	7:30 p.m.			0	0	0	0	Tornado	Tornado funnel cloud moving northeastward sighted at Burdette, did not reach ground.
Hydro (near), Caddo County, Okla.	1	8-9 p.m.	15	*5			1,000	50,000	Hail, wind, and rain	Some hailstones as large as golf balls. Storm moved northeastward through farming area and did very little damage to buildings.
Hawley (near), Jones County, Tex.	1	11:20 p.m.			0	0	0	0	Tornado	State Police reported no damage.

See footnotes at end of table.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

Table 4—Continued

Place	Date	Time	Length of path, miles	Width of path, yards	Number of persons		Estimated damage		Character of storm	Remarks
					Killed	Injured	Property (exclusive of crops)	Crops		
Kansas, south-central portion	1	Evening			0	0	0	0	Tornado	Funnels aloft sighted in 4 different areas: (1) Kingman County, 10 miles southwest of Kingman, at 7:30 p.m., 3 funnels reported. (2) Reno County, near Partridge, at 7:48 p.m., funnel moving northeastward not touching ground. (3) Reno County, east limits of Hutchinson, at 8:10 p.m., funnel moving eastward, definite roar. (4) Pratt County, between Pratt and Greensburg, at 8:36 p.m., funnel not touching ground.
Kirkland area, Childress County, Tex.	1	-			0	0			Tornado (suspected), wind, and rain	Demolished barn and damaged roof of another barn.
	1									Minor storms also reported in northeastern Kansas; and at Cheyenne, Wyo.
Black River Falls area, Jackson County, Wis.	2	5 a.m.					$24,000	$5,000	Rain and electrical	Rain of 4.55 inches at Black River Falls in approximately 6 hours. Highways #12 and #27 washed out. Buildings and homes had basements flooded. Grain and hayfields laid low by runoff water. Railroad traffic held up until water receded from tracks.
Hennessey, Kingfisher County, Okla.	2	Early morning	15	*3			60,000	2,500	Hail, wind, and rain	Hail damaged roofs and wheat. Rain washed out several bridge approaches. Storm moved eastward.
Fort Collins (northeast of), Colo.	2	1:30 p.m.	10	*4			Light	50,000	Hail and rain	Hailstones ranged up to size of large marbles. Damage mostly to crops, especially about 2,000 acres of sugar beets. Trees, alfalfa, and gardens also suffered to some extent. Storm moved eastward.
Erick (near), Beckham County, Okla.	2	3-4 p.m.			0	0	0	0	Tornado (suspected), wind, and rain	Funnel cloud moving northeastward observed on ground east of Erick.
Eunice, N. Mex.	2	3:30 p.m.	8	200			30,000		Wind, rain, and hail	Storm moved northeastward.
Gordon (north and west of), Nebr.	2	4-4:45 p.m.	12	*6			150,000	100,000	Hail	All west windows broken, wheat destroyed, and cattle bruised. Stones 3/8 to 1 inch in diameter.
Kimball County (northwestern portion), Nebr.	2	Afternoon	6	*2-3			Light	15,000	Hail	
Dorrance, Russell County, Kans.	2	Afternoon					Minor	Considerable	Hail, wind, and rain	Hail accompanying heavy rain reported to have caused considerable wheat damage.
Gage, Ellis County, Okla.	2	5-6 p.m.	60	*10			Minor	Minor	Wind	Gusts of wind to 70 m.p.h. recorded at Gage CAA station. Storm moved southeastward.
Minden (southeast of), Nebr.	2	5:30-6 p.m.	6	*1 1/2	0	0	9,000	15,000	Hail and tornado	Crop damaged by hail, other by tornado.
Great Bend (5 miles west of), Barton County, Kans.	2	8:17 p.m.			0	0	0	0	Tornado (suspected) and wind	Funnel aloft reported.
Mitchell, Cloud, and Jewell Counties, Kans.	2	9:30 p.m.			0	0	3,000	0	Tornado (suspected), wind, and rain	Considerable damage to farmstead near Asherville, Mitchell County; several reports of funnel cloud seen, along with minor wind damage near Concordia, Cloud County; residence damaged from rain and fallen tree at Burr Oak, Jewell County.
Plainview (4 miles northeast of), Nebr.	2	Evening			0	0	1,500	0	Tornado (possible)	
Barstow area, Ward County, Tex.	2	p.m.							Hail, wind, and rain	Hail as large as golf balls. 700 acres of cotton damaged; 100 window panes broken in high school building; also residential damage to windows and roofs.
Lubbock, Lubbock County, Tex.	2	-					60,000	60,000	Electrical	Lightning struck cotton warehouse causing $60,000 damage to building and $60,000 to stored cotton.
	2									Minor storms also reported in Audubon County, Iowa; in Bird Island vicinity, Minn; near Unionville, Mo.; in Rosebud and Valley Counties, Mont.; and in southeastern Howard County, Nebr.

See footnotes at end of table.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

Table 4—Continued

Place	Date	Time	Length of path, miles	Width of path, yards	Number of persons		Estimated damage		Character of storm	Remarks
					Killed	Injured	Property (exclusive of crops)	Crops		
Newhall, Los Angeles County, Calif.	3	1 p.m.	**100	100	0	0	0	0	Whirlwind	Severe localized whirlwind on clear, windless day damaged roof of building.
Spur, Dickens County, Tex.	3	3:40 p.m.	20	*2	0	0	$500,000	$50,000	Tornado hail, rain wind, and electrical	Funnel cloud did not reach ground. Some wind damage to TV antennas and trees. Hail damaged crops and smashed practically every window with west exposure. 300 windowpanes broken in one high school; heavy damage to roofs and automobiles. Storm moved southeastward.
Iowa, western and southern portions	3	Afternoon					37,400	Minor	Electrical and wind	Damaged buildings and set farm fires
Willow City (5 miles northwest of), Bottineau County, N. Dak.	3	Afternoon	2-3	20-50	0	0	0	0	Tornado rain, and electrical	Missed farm buildings, so no damage. Described roughly as S-shaped path, first moving northwestward, then westward, turned northwestward again and dissipated. Path through some fields clearly visible after it had passed, showing grain flattened in strip from 30 to 40 feet wide at some places. Heavy rain followed, estimated at 4 to 6 inches on some farms.
Kansas, central portion	3	Afternoon and evening			0	0			Tornadoes wind, rain and hail	Numerous reports received, of tornadoes sighted, both aloft and touching ground, through central Kansas between 3 and 11:30 p.m. Apparently little or no damage resulted from these storms listed below: (1) Funnel cloud south of Russell, Russell or Barton County, at 3:08 p.m., not touching ground. No confirmation. (2) West of Larned, Pawnee County, at 3:50 p.m., confirmed funnel aloft; 1 1/4-inch hail in Larned. (3) Pawnee Rock, Barton County, at 3:55 p.m., tornado sighted 1 mile north and just west of Pawnee Rock, went back into clouds at 4 p.m. Another report of funnel aloft 15 miles southwest of Great Bend at 4:05 p.m. (4) 4 miles northeast of Bucklin, Ford County, at 4:55 p.m., funnel aloft. (5) 6 miles west of Greensburg, Kiowa County, at 4:55 p.m., funnel moving northeast appeared about 100 feet above ground. (6) 35 miles west of Great Bend, Pawnee County, at 5:02 p.m., funnel aloft. (7) 3 to 5 miles northwest of Junction City, Geary County, at 5:17 p.m., unconfirmed funnel aloft. (8) Kingman, Kingman County, at 5:30 p.m., funnel aloft sighted, disappeared in few minutes. (9) Salina, Saline County, at 8:08 p.m., unconfirmed funnel aloft moving southeastward 2 miles west of Smoky Hill Air Base. In view about 5 minutes. (10) Unconfirmed tornado 15 miles southwest of Hutchinson Naval Air Base, Reno County, at 8:25 p.m., moving eastward on ground. (11) Unconfirmed funnel aloft 15 to 20 miles north of Wichita Veterans Hospital, Sedgwick County, at 11:30 p.m., moving northeast. (12) Unconfirmed tornado 4 miles south of Norway, Republic County. Time not established.
St. John, Stafford County, Kans.	3	4 p.m.	9	*1-2			4,200	65,000	Hail, rain, and wind	Intermittent 3-hour hail- and rainstorm caused damage over a 15-square mile area.
Glazier and Higgins, Hemphill and Lipscomb Counties, Tex.	3	5:20 p.m.			0	0	0	Minor	Tornado, rain, hail, and electrical	Tornado moving northeastward reported reaching ground, but no damage reported.
Carter, Beckham County, Okla.	3	5:30-6:30 p.m.					Minor	10,000	Hail, wind, and rain	Hail damage severe in small areas. Total area estimated at 10 square miles. Storm moved northeastward.
Seward, Stafford County, Kans.	3	6 p.m.	5	70	0	0	15,000	Minor	Tornado, wind, rain, and hail	4 farmsteads damaged, but dwellings escaped. Storm moved northeastward.
Newcastle (10 miles west of), Young County, Tex.	3	6 p.m.	3	*1	0	0			Tornado, hail, wind, rain, and electrical	Houses unroofed; windows broken; barns and cotton damaged. Storm moved southeastward.
Davidson area Tillman County, Okla.	3	6 p.m.					2,500	60,000	Hail, wind, rain, and electrical	Some unharvested wheat almost total loss after storm. Some hailstones as large as golf balls. Storm moved northeastward.
Shattuck (west of), Ellis County, Okla.	3	6-7 p.m.			0	0	1,000	Minor	Tornado (suspected), wind, rain, and hail	Farmhouse badly damaged. Storm moved northeastward.
Lake Traverse, Traverse County, Minn.	3	6:45 p.m.			7				Wind	7 persons drowned when sudden thundersquall capsized their fishing boat on Lake Traverse about 1,000 feet from Minnesota shore.

See footnotes at end of table.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

Table 4—Continued June 1955

Place	Date	Time	Length of path, miles	Width of path, yards	Number of persons		Estimated damage		Character of storm	Remarks
					Killed	Injured	Property (exclusive of crops)	Crops		
Arnett, Ellis County, Okla.	3	7-8 p.m.	15	*5			Minor	$10,000	Hail, wind, and rain	Hail heavy; some stones large. Storm moved northeastward.
Wichita Falls, Wichita County, Tex.	3	7:30 p.m.					$5,000		Wind, rain, and electrical	Wind gusts to 98 m.p.h., snapped powerlines, blew down a garage, and damaged drive-in theatre, signs, and roofs. Also additional damage to parked aircraft at Sheppard Air Base. Storm moved northeastward.
Waynoka (30 miles south of), Major County, Okla.	3	9:15 p.m.	5	200	0	0	Minor	Minor	Tornado, wind, and rain	Reports state that funnel cloud moving northeastward seen to strike ground, then lift, and then strike ground in farming area.
Kansas, north-central portions	3	Evening					5,000	50,000	Hail, wind, and rain	Numerous hail and damaging wind strips in Barton, Russell, Ellsworth, Lincoln, and Ottawa Counties. Damage mostly from hail with property wind losses estimated at $3,000. Storm occurred at 8 p.m., at Denmark, Lincoln County.
Harrold and Vernon, Wilbarger County, Tex.	3				0	0	0	0	Tornado	Funnel-like cloud observed, not touching ground. Airport manager at Vernon and telephone operator at Harrold both reported funnel cloud. Believed to be same storm; no damage reported.
Archer, Archer County, Tex.	3				0	0	0	0	Tornado	Funnel cloud reported.
Haskell, Haskell County, Tex.	3				0	0	0	0	Tornado	Funnel cloud reported.
	3									Minor storms also reported in St. Paul-Minneapolis area, Minn.; near Fairfax, Mo.; in Wayne County, N.C.; and at Sharon, Woodward, and Vici, Okla.
Lincoln County (southwestern portion), Colo.	4	11:20 a.m.			0	0	0	0	Tornado, rain, hail, and dust	Disturbance over wasteland. Funnel cloud touched ground at several points, but no damage resulted. Storm moved eastward.
Milwaukee, Milwaukee County, Wis.	4	2 p.m.				1	2,000		Electrical, wind, rain, and hail	Because of lightning strikes 4 homes damaged at $100 each, motor of trolley car burned out, traffic delayed, parts of city without electricity. Woman burned around neck as lightning shattered metal chain holding medal. Storm moved eastward.
Kansas, northern portion	4	3-8 p.m.					20,000	498,000	Hail, wind, rain, and electrical	Numerous hailstorms from Wallace and Wichita Counties east-northeastward to Washington County. Strong winds accompanied hail. Heaviest crop damages occured in Thomas, Wallace, Logan, Sheridan, and Norton Counties.
Sturgeon Bay, Door County, Wis.	4	2:40 p.m.			2	3			Electrical	2 persons killed and 3 others dumped into water as lightning struck boat.
Osborne, Smith, Jewell, and Republic Counties, Kans.	4	3:20 p.m.	70	100-900	0	0	200,000	25,000	Tornadoes, wind, rain, and hail	Tornado first seen just north of Downs, Osborne County. It moved nearly due north through Dispatch community of southeastern Smith County, damaging or demolishing 10 farmsteads. It then lifted and followed a more easterly course, scattering debris for distance of 6 miles, and continued visible as it moved northeastward. It next touched down 2 miles west of Mankato, Jewell County, at 4:38 p.m., with damage path about 4 miles long through northern outskirts of Mankato. In Jewell County, 5 homes and 35 other buildings destroyed and 34 homes and 82 other structures damaged. Funnel lifted beyond Mankato, with next serious damage reported some 25 miles northeastward just east of Republic, Republic County, at approximately 6 p.m., where 1 farmstead nearly demolished and 3 others damaged. Tornado then apparently moved across Nebraska line where considerable damage reported between Chester and Hubbell, Nebr., between 6:30 and 7 p.m. A number of witnesses reported seeing several funnels and it is quite likely damage along this 70-mile broken path resulted from more than 1 funnel. Crop losses are from spotty hail which accompanied tornado. At Courtland in Republic County, hailstones measured 8 inches in circumference.
Ford, Edwards, and Pawnee Counties, Kans.	4	4 p.m.	50	100-*2	0	0	250,000	50,000	Tornadoes, hail, wind, rain, and electrical	Some indication storm began 17 miles south of Dodge City, Ford County, but first definite time fix was 20 miles east of Dodge City touching ground at 4:10 p.m. Storm moved northeastward following Arkansas River bottoms, passing east of Kinsley, Edwards County, and west of Garfield, Pawnee County, with final damage 3 miles northeast of Larned, Pawnee County, at 6 p.m. Major tornado damage occurred in Garfield area in Pawnee County. 4 homes destroyed, 6 sustained damage, and 35 other buildings destroyed. In Edwards County 1 home damaged, 1 other building destroyed,

See footnotes at end of table.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

Table 4—Continued

Place	Date	Time	Length of path, miles	Width of path, yards	Number of persons		Estimated damage		Character of storm	Remarks
					Killed	Injured	Property (exclusive of crops)	Crops		
Kansas (Cont'd)										and 4 damaged. No damage reported in Ford County. Damage path uneven and broken and reports indicate at least 6 or 8 separate funnels. Width of path variable and reported from 100 yards to 2 miles. One witness likened tornado cloud to huge inverted cup or bowl which let down fingerlike tentacles. If storm began 17 miles south of Dodge City, path would be 70 miles long. Crop losses given were from heavy hail which accompanied tornado. One hailstone in Kinsley area measured 12 1/2 inches in circumference.
Cross Cut, Brown County, Tex.	4	4:30 p.m.	2	*1	0	0	$6,000	$ 0	Tornado and rain	Tornado moving eastward demolished school gymnasium and unroofed 10 homes. Blew away granary and shed on farm east of town.
Du Page County, Ill.	4	Afternoon			1				Electrical	Local thunderstorm in which man killed by lightning.
Illinois, southwestern portion	4	Afternoon					25,000	70,000	Hail and wind	Scattered locally severe thunderstorms with hail in areas of Monroe, St. Clair, Clinton, Washington, and Perry Counties.
Kansas, western and north-central portions	4	Afternoon and evening			0	1	35,000	Minor	Tornadoes, wind, rain, hail, and electrical	(1) Unconfirmed tornado 3 miles west of Sharon Springs, Wallace County, at 1:20 p.m., moved southward and dissipated with no damage. (2) 2 funnels reported about 25 miles southwest of Oakley, Logan County, at 2:30 p.m., moving northeastward. One or both funnels came to ground with path about 7 miles long. Little damage. (3) Tornado demolished farm buildings near Cora, Smith County, at 3:30 p.m. (4) Funnel aloft sighted near Quinter, Gove County, during afternoon. (5) Funnel aloft moving northeastward reported 8 miles northeast of Syracuse, Hamilton County, at 4:32 p.m. (6) Funnel aloft seen at Jamestown, Cloud County, at 5:15 p.m., moving northeastward. (7) Tornado dipped to ground about 4 miles north of Laird, Ness County, at 5:30 p.m., doing minor damage, then lifted and moved northeastward. (8) Tornado damaged 3 farmsteads 15 miles south of Wakeeney, Trego County. (9) Tornado funnel sighted about 5 miles southwest of Minneapolis, Ottawa County, at 7:35 p.m. Minor damage to trees and haystacks and 4 head of cattle killed by lightning. Heavy rain accompanied storm. (10) 2 funnels reported 10 to 15 miles southwest of Hill City, Graham County, at 7:38 p.m., moving south-southeast with 1 funnel not touching ground. (11) Funnel seen to southwest of Clifton, Clay County. Heavy hail 8 miles northwest of Clifton in Cloud and Washington Counties, causing 100 percent damage in some fields. (12) Funnels aloft reported both east and west of Abilene, Dickinson County, at dusk. (13) Terrific wind and rainstorm at Clay Center, Clay County, at 8 p.m., caused power and telephone failures. Tile roof of high school badly damaged and windows of building blown outward. Other wind damage mostly of minor nature. 1 person injured by falling brick. (14) Scattered wind damage, possible tornadic, in Blue Rapids-Frankfort area, Marshall County, at 9 p.m.
Franklin County (southern portion), Nebr.	4	5-5:30 p.m.	4	*1-1/2			3,000	20,000	Hail	Stones 1 1/2 to 2 1/2 inches in diameter.
Frederick, Tillman County, Okla.	4	5:30-6:30 p.m.	15	*5			35,000	5,000	Hail, wind, and rain	Newspaper reported hailstones as large as golf balls. Storm moved eastward.
Cache area, Comanche County, Okla.	4	5:50 p.m.			0	0	0	0	Tornadoes (suspected), wind, and rain	2 funnels moving northeastward sighted aloft.
Belleville, Republic County, Kans.	4	6 p.m.					10,000		Electrical, wind, rain, and hail	Barn and contents, including 210 sheep, burned.
Stafford County, Kans.	4	6:30 p.m.	7	400	0	0	12,000	10,500	Tornadoes, hail, wind, and electrical	Tornado following erratic northerly course from 6 miles north of Stafford to 5 miles northeast of Hudson, destroyed 1 farmstead and damaged another, killed 30 head of cattle, pulled 2 oil derricks with their four 2-ton anchor posts out of ground, and stripped 3-inch layer off 300 foot section of good blacktop road. 10 or 12 funnels reported seen from Macksville, St. John, Stafford, and Hudson areas, but apparently only one came down to earth. Hail accompanied tornadoes with damages estimated at $10,000.
Brady, McCulloch County, Tex.	4	6:30 p.m.	5	*1-2		3	100,000		Wind and rain	Destroyed Butane Company building and dance pavilion. Major damage to 8 other structures and minor damage to 36. Trees uprooted. Storm moved south-southeastward.

See footnotes at end of table.

Table 4—Continued

Place	Date	Time	Length of path, miles	Width of path, yards	Number of persons		Estimated damage		Character of storm	Remarks
					Killed	Injured	Property (exclusive of crops)	Crops		
Hydro (near), Caddo County, Okla.	4	6:30-7:30 p.m.	15	300	0	0	$10,000	$2,500	Tornado	Tornado moving northeastward severely damaged several sets of farm buildings. A few persons reported hearing roaring noise.
Thayer County (southern portion), Nebr.	4	6:50-7:30 p.m.	60	*1-1/2	0	1	51,000	5,000	Hail and tornadoes	Tornadoes moved into State near Hubbell from Kansas; moved east-northeastward. Hailstones size of peas to eggs. 1 funnel cloud observed. Property damage by tornado, crop by hail.
Lawton, Comanche County, Okla.	4	7:15-7:45 p.m.			0	0	0	0	Tornadoes (suspected)	Funnels sighted aloft, moving northeastward.
Crescent area, Logan County, Okla.	4	7:30 p.m.			0	0	0	0	Tornado (suspected), wind, rain, and electrical	Tornadic disturbance moving northeastward reported.
Orlando (near), Logan County, Okla.	4	7:30-8 p.m.			0	0	Minor	Minor	Tornado (suspected), wind, and rain	2 funnel clouds moving northeastward observed aloft.
Reno and Rice Counties, Kans.	4	7:40 p.m.	7	200	0	0	10,000	20,000	Tornadoes, hail, rain, wind, and electrical	Tornado demolished farmstead 2 miles south of Raymond then passed on east-northeastward to north of Alden and aloft south of Lyons. Several funnels observed west of Lyons and Sterling between 7 and 8 p.m., but none did appreciable damage. Another funnel sighted an estimated 20 miles south of Sterling, Reno County, moving eastward aloft. Heavy rain and hail with some stones up to 4 inches in diameter accompanied tornadoes.
Waynoka (near), Woods County, Okla.	4	8:30 p.m.	2	100	0	0	10,000	500	Tornado, wind, rain, and hail	Reports state that funnel cloud was not observed on ground, but just a few feet above it. Several homes damaged in area. Storm moved northeastward.
Waco (20 miles west-northwest of), McLennan County, Tex.	4	8:45 p.m.			0	0	0	0	Tornado	Apparently did not reach ground.
Dempsey community, Roger Mills County, Okla.	4	9-10 p.m.					5,000	15,000	Hail, wind and rain	Some reports state that accumulation of hail was 3 feet in isolated places. Some hail still visible 3 days after storm. Storm moved northeastward.
Fort Calhoun, Nebr.	4	9:25 p.m.	**440	Narrow	0	0	Slight	0	Tornado	Funnel observed. Trees topped, but little damage near ground.
Fairview (near), Major County, Okla.	4	10 p.m.	5	300	0	0	1,000	Minor	Tornado, wind, rain, and electrical	Tornado moving northeastward damaged a few small buildings.
Liberal, Seward County, Kans.	4	10:43 p.m.			0	0		0	Tornadoes (suspected) and wind	Reports received of funnels aloft sighted 10 miles northwest of Liberal at 10:43 p.m., and 5 miles east of Liberal at 10:52 p.m. Radar did not indicate severe storm in area and some wind damage in Liberal vicinity indicated straight-line winds.
Haskell area, Haskell County, Tex.	4								Hail	Heavy damage in Mattson community and Paint Creek section (east of Haskell). Crops and buildings damaged.
Nunn, Colo.	4						Moderate	Light	Rain	Heavy rains flooded town with several inches of water, causing light to moderate damage in property, roads, and vegetation.
	4									Minor storms also reported at Eureka, Kans.; near Versailles and Sterling, Mo.; and at Okeene, Okla.
Kansas, southeastern portion	5	1:20-1:30 a.m.			0	0	500		Tornado (suspected), wind, and rain	At 1:20 a.m., unconfirmed tornado northeast of Ft. Scott touched ground, but caused no damage. At 1:30 a.m., sharp wind at Parsons partially unroofed cold storage plant; also trees uprooted and broken. Heavy rain accompanied storm.
Lake Elmo, Washington County, Minn.	5	1:45 p.m.			0	0	0	0	Tornado (suspected)	Funnel cloud aloft moving northward observed by several persons about 1 mile north of village of Lake Elmo. Apparently funnel did not descend to earth as no damage reported.
Cloud Creek (near), Delaware County, Okla.	5	3-4 p.m.			1				Electrical wind, and rain	Man struck and killed by lightning as he was walking toward his home.
Lampasas, Lampasas County, Tex.	5	3:15 p.m.							Wind and hail	Damaged roofs of houses and barns, and damaged a tabernacle. Severe damage to crops. Storm moved southeastward. May be same as Jarrell-Rockdale storm.

See footnotes at end of table.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

Table 4—Continued

Place	Date	Time	Length of path, miles	Width of path, yards	Number of persons		Estimated damage		Character of storm	Remarks
					Killed	Injured	Property (exclusive of crops)	Crops		
Emory (5 miles west of), Rains County, Tex.	5	3:30 p.m.	7	300-1000			$25,000	$75,000	Wind, hail, rain, and electrical	Storm moved eastward.
Sugartree community, Carroll County, Mo.	5	3:30 p.m.	5	*2			1,500	100,000	Hail, wind, and electrical	Mostly damage to field crops by hail; some stones 2 inches in diameter. Storm moved northeastward.
Houghton and Keweenaw Counties, Mich.	5	Afternoon					10,000		Hail, electrical, wind, and rain	Most damage caused by heavy hail, especially in town of Mohawk, where several hundred windows broken. Lightning also damaged several trees and caused other property damage.
Pleasant Green and Mt. Nebo, Cooper County, Mo.	5	Late afternoon					Slight	10,000	Hail and rain	Most damage to growing crops and gardens.
Williamson, Milam, and Bell Counties, Tex.	5	4 p.m.	40	*1-20			50,000	50,000	Wind, hail, rain, and electrical	Area affected includes Jarrell, Salado, Bartlett, Holland, Rockdale, Georgetown, and Granger. Hail caused extensive damage to crops in path of storm. Feed store damaged at Jarrell and both ends blown out of cotton warehouse. Roofs damaged and many trees uprooted along path. Widest path of damage from Salado to Georgetown, narrowing as it reached Rockdale. Believed to be same storm area that produced tornado at Florence. Estimate of damage includes damage around Florence. (See last page for Florence, Tex., storm.)
Aloha Township, Cheboygan County, Mich.	5	5 p.m.	2	1,000	0	0	200	200	Tornado (suspected), wind, rain, and electrical	Storm uprooted trees 18 inches in diameter, carried 14-foot boat 100 feet, and picked up small buildings. Storm moved northeastward.
Mexia area, Limestone County, Tex.	5	5:30 p.m.							Wind, rain, hail, and electrical	Damaged roofs, awnings, trees, and transformers 6 miles south of Mexia. 2 roofs blown off in Mexia. Some crops damaged by hail.
Clark area, Randolph County, Mo.	5	6:30 p.m.					Slight	Moderate	Hail, wind, and rain	Hail damage confined to 10-square mile area. Storm moved northeastward.
Brenham area, Washington County, Tex.	5	7 p.m.	4	*1				10,000	Hail, rain, and electrical	Hail (about size of ice cubes) broke glass in greenhouse and some skylights. Mill Creek area (5 miles west of Brenham) had most hail damage. Storm moved southeastward.
Encinal, La Salle County, Tex.	5	7:30 p.m.	1	*1-1/8	0	1	75,000	0	Tornado	Tornado moving southeastward demolished several warehouses, lumber company building, filling station, part of resturant, and several frame houses. Large tree uprooted and broken up. Powerline poles twisted off to ground.
Lufkin (3 miles northwest of), Angelina County, Tex.	5	7:50 p.m.			0	0	0	0	Tornado	Funnel cloud reported, not touching ground.
Weimar area, Colorado County, Tex.	5	10 p.m.			0	0			Tornado, wind, and hail	Tornado moving southeastward swept away barn, garage, and outbuildings; iron roofing carried 1 mile.
Eagle Lake, Lissie, and Egypt, Colorado and Wharton Counties, Tex.	5	10:30 p.m.	7 1/2	*1				75,000	Hail, wind, rain, and electrical	300 acres of corn and 300 acres of cotton destroyed. Heavy damage to about 3,000 acres of rice. Minor damage due to wind. Storm moved southeastward.
Port Lavaca, Calhoun County, Tex.	5	11:30 p.m.			0	0	3,000		Tornado (suspected) and rain	Demolished boathouses and damaged motorcruiser, 2 light planes, and several houses around Port Lavaca.
Cook County, Ill.	5						15,000		Wind	Wind accompanying thunderstorm did minor damage in Chicago area.
	5									Minor storms also reported in northern Iowa; in Sussex County, Del.; at Owatonna, Minn.; at Rosebud, Jamestown, Cliquot, and near Madison, Mo.; in New Jersey; in Pender County, N.C.; and at Schulenburg, Tex.
Barton and Dade Counties, Mo.	6	Noon	10	*3			30,000	100,000	Hail, wind, and rain	Field crops suffered bulk of damage. Storm moved eastward.
Bourbon, Crawford, and Cherokee Counties, Kans.	6	12:30-4 p.m.						100,000	Wind, hail, rain, and electrical	Afternoon thunderstorms, accompanied by high wind, hail in small strips, and heavy rain.

See footnotes at end of table.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

Table 4—Continued

Place	Date	Time	Length of path, miles	Width of path, yards	Number of persons		Estimated damage		Character of storm	Remarks
					Killed	Injured	Property (exclusive of crops)	Crops		
Joplin and vicinity, Jasper County, Mo.	6	1:30 p.m.					$ Several hundred thousand	Heavy	Hail, wind, and rain	Worst hailstorm in Joplin area since 1950. Roofs damaged, some windows and electric signs broken, and automobiles damaged. Heavy damage to wheat and oats. Storm moved southeastward.
Petoskey (near) Mich.	6	3 p.m.	1	Narrow	0	0	1,000	$2,000	Tornado (suspected), wind, rain, hail, and electrical	Storm struck just south of Petoskey. It uprooted several trees and 1,500 tomato plants, and knocked over several small buildings. Accompanied by heavy rain, hail, and lightning. Path very narrow and people just outside of path reported no unusual winds. Storm moved northeastward.
Lima, Ohio	6	3:40-3:55 p.m.	3	*1			25,000		Wind	Strongest winds and reported damage confined to southwest side of Lima where several factory roofs damaged by winds recorded up to 85 m.p.h.
Green Ridge (south of), Pettis County, Mo.	6	4 p.m.	7-8	*3			5,000	Considerable	Hail and rain	Storm moved eastward.
Iowa, eastern portion	6	Afternoon					10,000		Hail, wind, electrical, and rain	Damaged buildings and crops.
Lower Michigan, central and southern portions	6	Afternoon				2	50,000	10,000	Wind, electrical, and rain	Most damage caused by high winds. No severe damage reported, but many localities scattered through central and southern portions of Lower Michigan reported losses. Some damage caused by lightning.
Hume (2 miles east of), Bates County, Mo.	6	7 p.m.	3	*2 1/4				10,000	Hail and rain	Storm moved southward.
Clever area, Christian County, Mo.	6	9:30 p.m.	4	*2			Considerable	5,000	Hail, wind, and rain	Heavy fall for about 10 minutes. House siding pocked to depth of 1/8 inch. Stones 1/4 to 1 inch. Small grains damaged. Storm moved southeastward.
	6									Minor storms also reported at St. Cloud, Fla.; in Clark and Simpson Counties, Ky.; and in Martin and Faribault Counties, Minn.
Miami (10 miles north-northeast of), Fla.	7	6:20 a.m.			0	0	0	0	Waterspout	Reported by aircraft pilot as extending 2 to 3 hundred feet below cumulus cloud, but not reaching surface.
Tyrrell, Martin, Greene, Pitt, Wilson, Robeson, Scotland, Lincoln, Durham, Granville, Surry, Yadkin, Alexander, Watauga, Yancey, Columbus, Wayne, and Beaufort Counties, N.C.	7	Noon-6 p.m.					10,000	444,000	Hail	Widespread thunderstorms in connection with frontal passage produced damaging hail scattered over wide area. Most damage to tobacco in fields.
Heaters (near), W. Va.	7	12:30 p.m.					Minor	Minor	Rain	Cloudburst caused small stream to overflow its banks, gardens to be washed away, and railroad beds to be inundated.
Virginia	7	Early afternoon	30			1	100,000	75,000	Hail, wind, electrical, and rain	From Martinsville northeastward into southeastern Campbell and western Charlotte Counties. Hailstones varying in size from 1/2 to 3 inches and some wind. One person injured by lightning. Storm moved northeastward.
Lawrenceburg, Lawrence County, Tenn.	7	Afternoon					25,000	Slight	Hail and electrical	Heavy thunderstorm, accompanied by hail. More than 100 roofs destroyed or damaged. Many television sets put out of commission.
South Carolina, scattered areas	7	Afternoon				1	3,400	1,500	Wind, hail, rain, and electrical	Severe thunderstorm reported in Greenwood, Laurens, Aiken, York, Barnwell, and Georgetown Counties.
Lawrence County, Tenn.	7	Afternoon					25,000	Slight	Hail	Heavy thunderstorm accompanied by hail struck town of Lawrenceburg. More than 100 roofs destroyed or damaged. Many television sets out of commission.
Campbell County, Tenn.	7	3 p.m.	10	500			Slight	10,000	Hail	Violent thunderstorm accompanied by hail struck communities of Alder Springs, Victory, and Bethlehem. It lasted for about 25 minutes. In some spots hail drifted into piles 2 feet deep. Many tobacco beds destroyed and many acres of corn badly damaged.

See footnotes at end of table.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

Table 4—Continued

Place	Date	Time	Length of path, miles	Width of path, yards	Number of persons		Estimated damage		Character of storm	Remarks
					Killed	Injured	Property (exclusive of crops)	Crops		
Cayuga and Wayne Counties, N.Y.	7	3:30 p.m.						$10,000	Hail, electrical, wind, and rain	5 miles south of Wolcott, hail in 5-square mile area damaged muckland crops. Hailstones averaged 3/4 to 1 inch in diameter. Damage to other property negligible.
Beaverton (1 1/2 miles south of), Gladwin County, Mich.	7	5:45 p.m.	4	100	0	0	$10,500	1,000	Tornado, wind, and rain	Tornado moving northwestward lifted several times. Several buildings destroyed on 1 farm and 1 farm home twisted from its foundations. Tornado funnel seen and noise like "a dozen freight trains" reported by a person in vicinity.
St. George area, Dorchester County, S.C.	7	Evening	12	*1/4			600	35,000	Hail, wind, rain, and electrical	100 acres of tobacco damaged, most of damage from hail.
Webster Springs (near), W. Va.	7				1	2	0	0	Electrical	2 men knocked unconscious and 1 man killed when lightning felled a tree a few feet from make-shift shelter in which the 3 lumbermen had sought refuge from storm. Apparently, it was the lightning and not the felled tree which caused death and injuries.
Louisville, Ky.	7				1				Electrical	Fatality result of being struck by lightning.
Baltimore, Md.	8	All day					10,000		Wind and rain	Mostly water and tide damage.
Waco area, McLennan County, Tex.	8	2:15 a.m.			0	0	0	0	Tornado (suspected)	Funnel cloud, not reaching ground, reported southwest of Waco. Report unconfirmed.
Corn area, Washita County, Okla.	8	10:30 a.m.	25	*10			15,000	125,000	Hail, wind, rain, and electrical	Small grain completely destroyed by hail and rains in parts of this area. Storm moved southeastward.
Coleman area, Coleman County, Tex.	8	11 a.m.						5,000	Wind, dust, and rain	Blew all cotton and feed crops out; had to replant. Wind estimated at 60 m.p.h. Storm moved southwestward.
Point Au Fer Reef, St. Mary Parish, La.	8	11 a.m.-noon							Wind	Although no damage at Reef, winds reached 65 m.p.h., at lighthouse. Storm moved southeastward.
Sayre (21/2 miles southeast of), Beckham County, Okla.	8	11:30 a.m.	1	500	0	0	Minor	100,000	Tornado, rain, hail, and wind	Tornado moving northeastward observed on ground. Greater portion of damage was from unusually heavy rainstorm. Some crop damage from hail.
Hastings, Jefferson County, Okla.	8	1-1:30 p.m.	15	*5			10,000	2,500	Wind and rain	Greater portion of damage when roofs of buildings blown away. Storm moved southeastward.
Hale Center and Petersburg, Hale County, Tex.	8	1:30 p.m.			1		5,000	50,000	Wind, hail, electrical, and rain	Storm moved southeastward. Hail damage heaviest around Petersburg. Man killed by lightning while on tractor in field about 3 miles north of Hale Center. Probably same as Crosbyton storm.
Nocona area, Montague County, Tex.	8	1:50 p.m.					100,000		Wind, hail, and rain	Houses unroofed; drive-in theater damaged; wholesale company building demolished. Storm moved southward.
Marlow, Stephens County, Okla.	8	2-3 p.m.					1,000	10,000	Electrical, hail, wind, and rain	Lightning struck and damaged utility wires. Greater portion of crop damage due to hail. Storm moved southeastward.
Ranger, Eastland County, Tex.	8	3 p.m.	2	75	0	1	3,000	Heavy	Tornado, wind, hail, rain, and electrical	Trees uprooted; buildings and houses unroofed. Storm moved southeastward.
Crosbyton, Crosby County, Tex.	8	3 p.m.	8	*5			35,000	200,000	Hail, wind, rain, and electrical	About 20,000 acres of young cotton completely destroyed. Winds damaged roofs and plate-glass windows. Storm moved northeastward.
Fort Worth area, Tarrant County, Tex.	8	3 p.m.				1			Wind, rain, and electrical	Meacham Field reported gusts of 75 m.p.h.; Carter Field had gusts to 55 m.p.h. Fast-moving squall line. Man injured by barrel top carried by wind. Storm moved southeastward.
Seagraves area, Gaines County, Tex.	8	3:30 p.m.					5,000	Heavy	Wind and sand	Destroyed ball-park stadium and a partially completed building. Storm moved southwestward.
Dallas area, Dallas County, Tex.	8	3:34 p.m.					50,000		Wind, electrical, and rain	Lightning damaged home; warehouse demolished; wind 49 m.p.h., gusts to 58 m.p.h. Storm moved southeastward.
Post area, Garza County, Tex.	8	4 p.m.							Wind, dust, and rain	2,000 acres of cotton destroyed by sand drifts. Plate-glass window broken; trees uprooted.

See footnotes at end of table.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

Table 4—Continued

Place	Date	Time	Length of path, miles	Width of path, yards	Number of persons		Estimated damage		Character of storm	Remarks
					Killed	Injured	Property (exclusive of crops)	Crops		
Midland, Midland County, Tex.	8	5 p.m.	**100	25		1	$5,000		Wind	Roof of hanger at Midland Airport damaged and rabbit hatches overturned. Plane damaged. Storm moved south-southwestward.
San Angelo, Tom Greene County, Tex.	8	5 p.m.					25,000	$75,000	Wind and dust	Considerable damage to roofs, windows, and crops. Gusts as high as 68 m.p.h. Storm moved southeastward.
Groesbeck, Limestone County, Tex.	8	7 p.m.					50,000	50,000	Wind and rain	Damaged roofs and uprooted trees. Storm moved southeastward.
Midland, Howard, Scurry, Martin, and Dawson Counties, Tex.	8	P.m.						150,000	Wind and dust	Crops damaged by wind and dust.
Spur area, Dickens County, Tex.	8	P.m.			0	0	Minor	Minor	Tornado, wind, hail and rain	Damage to small buildings, roofs, and trees. Funnel apparently did not reach ground. Storm moved northeastward.
Lamesa area, Dawson County, Tex.	8				1		Minor	Minor	Electrical	Lightning killed farmer 3 miles southwest of Lamesa. Roofs damaged by wind and crops blown out.
Lake Diversion, Archer, and Baylor Counties, Tex.	8				0	0		0	Tornado and wind	Picked up boathouse cabin, carried it 200 yards and smashed it against ground.
Idalou to Heckville, Lubbock County, Tex.	8								Hail and wind	Crops severely damaged.
San Gabriel, Milam County, Tex.	8								Hail and wind	Crops severely damaged; some damage to houses.
Mineral Wells, Palo Pinto County, Tex.	8						100,000		Wind	Damaged roofs and awnings; trees uprooted.
	8									Minor storms also reported at Solomons and Hagerstown, Md.; at Wilmington, Del.; at Comanche and Oklahoma City, Okla.; and at Abilene, Lorena, Dozier, Fort Stockton, and Wichita Falls, Tex.
Point Au Fer Reef, St. Mary Parish, La.	9	9-10:30 a.m.							Wind	Winds reached 70 m.p.h., at lighthouse; no damage reported.
Illinois, northwestern portion	9	Afternoon						125,000	Hail	Severe thunderstorms caused rather widespread hail damage in DeWitt, Bureau, Henry, Woodford, and Stark Counties.
Port Arthur area, Jefferson County, Tex.	9	4 p.m.			1	2	1,500		Wind and electrical	Lightning struck 3 persons, killing 1 and injuring other 2. Trees torn; powerpoles downed. Storm moved westward.
Walnut Lake Township, Faribault County, Minn.	9	4:30 p.m.	2	*1				25,000	Hail	Fields of soybeans total loss. Corn not advanced sufficiently to be damaged to any great extent. Storm moved northeastward.
Scottsbluff, Nebr.	9					1			Wind	3 glass cases blown over onto boy causing injury.
	9									Minor storms also reported in El Paso County, Colo.; and in north-central Iowa.
Grove (near), Delaware County, Okla.	10	8:50-9:45 a.m.	5-10	Narrow	0	0	0	0	Tornado (suspected), wind, rain, and hail	Funnel aloft moving south-southwestward observed by several persons.
Pope and Conway Counties, Ark.	10	12:30 p.m.	18	*1				15,000	Hail and rain	Atkins and Blackwell northeastward to Lanty. Hail, size of marbles, covered ground. Cotton, corn, oats, and soybeans on about 1,500 acres destroyed.
Pensacola, Fla.	10	1 p.m.	**200	75			15,000		Wind, rain, and electrical	Partially unroofed municipal auditorium and warehouses. Storm moved east-southeastward.
Quitman and Pearson, Cleburne County, Ark.	10	1 p.m.	17	400				20,000	Hail and rain	Storm moved northeastward.

See footnotes at end of table.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

Table 4—Continued

Place	Date	Time	Length of path, miles	Width of path, yards	Number of persons		Estimated damage		Character of storm	Remarks
					Killed	Injured	Property (exclusive of crops)	Crops		
Marked Tree (3 miles northeast of), Poinsett County, Ark.	10	4:15 p.m.	1/2	200-300	0	0	$300	$0	Tornado, wind, rain, and hail	Funnel cloud observed, moving eastward. Large limb blown onto truck, damaging hood and fender. Roof lifted off of pumphouse and shingles torn from house.
Eastland (5 miles southwest of), Eastland County, Tex.	10	4:30 p.m.	2	*1			5,000	10,000	Hail, electrical, and rain	In Mangum community stones as large as baseballs broke plate-glass windows and damaged crops. Storm moved southwestward.
Gaffney, Cherokee County, S. C.	10	5:30 p.m.					12,000		Electrical and rain	Residence destroyed by fire from lightning.
Red Willow County, Nebr.	10	7-9 p.m.	8	*1			Light	30,000	Hail	Stones 3/4 to 1 inch in diameter.
Odomtown, Barnwell County, S.C.	10	8 p.m.					8,000	2,000	Wind, rain, hail, and electrical	
	10									Minor storms also reported at Jemison, Ala.; and in Franklin and Kennebec Counties, Maine.
Columbia, Richland County, S.C.	11	11:30 a.m.	**100	13	0	0	4,000	0	Tornado, wind, rain, hail, and electrical	Funnel described as spinning smoke, roaring like 4 or 5 planes, while obliterating sight of objects behind it. Signs, furniture, and debris carried 50 to 75 feet. Twister touched ground in area of steepest downslope. From damage to surrounding trees and from outward leaning of poles and aerials some distance either side of path, it would appear that width of funnel was about 200 feet at elevation of about 50 feet along path about 600 to 700 feet long. Terrain over which storm passed slopes downward from south to north a total of about 30 feet for distance of about 600 feet, but steepest slope of about 10 feet for distance of about 50 feet occurs where funnel first made its appearance on ground. Terrain mostly wooded with tall pines to left of path while to right there are smaller trees, residences, and lawns. Funnel on ground passed in backyard section between rows of residences. It was here that most of damage was found. Right sides of 2 houses to left of storm severely damaged and heavy house trailer moved 100 feet. While house trailer appeared lightly damaged on outside, interior was a shambles attesting to violence of propelling movement. Storm moved northeastward.
Bertie, Chowan, Martin, Edgecombe, Nash, Pitt, Wilson, Harnett, Johnston, Lee, Sampson, Cumberland, Hoke, Anson, Caswell, Durham, Granville, and Moore Counties, N. C.	11	1-7 p.m.					191,000	2,793,000	Hail and wind	Conditions similar to those on 7th brought even greater hail damage to crops and property. Although all reported as hail damage, some probably due to wind.
Owen County (southeastern portion), Ind.	11	3:15 p.m.			0	0	5,000	0	Tornado (suspected)	Storm described as small twister destroyed barn and broke off several trees and electrical poles all within small area.
Pitt and Martin Counties, N.C.	11	3:30 p.m.	15	200	0	0	400,000	100,000	Tornado	Moved along skipping path about 15 miles long; combined length of damaged areas only about 3 miles. Greatest damage in Bethel, where auction house and several warehouses destroyed, along with numerous roofs and several small homes and other buildings. Storm moved east-northeastward from Penny Hill in Pitt County through Bethel and then Gold Point section of Martin County.
Botetourt, Campbell, Chesterfield, Prince George, Clarke, and Frederick Counties, Va.	11	Afternoon and evening	2-20		0	0	20,000	40,000	Tornado (suspected), wind, hail, electrical, and rain	Thunderstorm, except that storm in Blue Ridge Community of Botetourt County at 3 p.m., apparently was at least an incipent tornado which possibly could have developed over a more favorable terrain . Loss of turkeys in this community amounted to $4,500. Damaging winds &/or hail occurred in widely separated areas in Botetourt, Campbell, Chesterfield, Prince George, Clark, and Frederick Counties. Storm moved northeastward, except eastward in Botetourt County.
Darlington, Md.	11	7-8 p.m.			2				Wind	Boat capsized by rough waters.

See footnotes at end of table.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

Table 4—Continued

Place	Date	Time	Length of path, miles	Width of path, yards	Number of persons: Killed	Number of persons: Injured	Estimated damage: Property (exclusive of crops)	Estimated damage: Crops	Character of storm	Remarks
	11									Minor storms also reported in Elfrida-McNeal areas, Ariz., and in Baltimore, Md.
Clearfield, Cumberland, Dauphin, and Lancaster Counties, Pa.	12	A.m.-p.m.					$115,000		Winds, hail, electrical, and rain	In Clearfield County, rapid runoff from heavy rains washed away dam and boating dock on West Branch of Susquehanna River at Clearfield. Hail, accumulating to depth of several inches in some spots, caused damage to young crops, grape arbors, and fruit trees. In eastern Cumberland County and western Dauphin County, hailstones measured as large as 1 1/4 inches, and caused some crop damage. Lightning set fire to furniture repair shop in Harrisburg, with damage estimated at $15,000. In Lancaster County, high winds unroofed and caused considerable other damage to dwelling. Lightning responsible for fire which destroyed grain warehouse with damage estimated at $100,000. Many acres of young corn and tobacco ruined by hail, and fields of barley and wheat flattened. Scores of birds killed during storm. Minor damage from hail, winds, and heavy rains reported in scattered areas of the State. Storm moved eastward.
Phoenix, Ariz.	12	2:10 p.m.	3	4 500			220,000		Wind, rain, hail, and electrical	Struck north side of Sky Harbor Airport. Winds estimated at 70 m.p.h., in area where 30 airplanes damaged even though tied down. Some damage also to hangers. Some hail up to 3/8 inch in diameter fell along with brief torrential rains. Peak gust of wind at Weather Bureau, about 1/2 mile south was only 33 m.p.h. Storm moved northwestward.
Wallace, Greeley, Wichita, and Kearny Counties, Kans.	12	Evening	70	*3-5	0	0	1,500	$200,000	Tornadoes, hail, wind, rain, and electrical	Severe hailstorm from 6 to 9 p.m., with path 3 to 5 miles wide from about 10 miles west of Sharon Springs across northeastern Greeley County, western and southern Wichita County into northeastern Kearny County. Hailstones not exceptionally large, but high winds, and heavy hail resulted in total wheat loss over many acres. Tornado funnel seen in southwestern part of Wallace County. Second tornado which moved over pastureland and wheat fields seen southwest of Leoti, Wichita County by several persons. Storm moved southeastward.
Durango, Colo.	12	P.m.					1,000	Light	Hail	Hailstones to 1 inch in diameter. Damage mostly to windows, roofs, and automobiles.
	12									Minor storms also reported at Wilmington, Del.; and at Mount Airy, Md.
New England, all portions	12-13	Afternoon and night			1	2	100,000		Electrical, rain, and hail	Fisherman killed by lightning at North Hero, Vt. 2 persons stunned by lightning at Warner and West Lebanon, N.H. Damage from lightning-set fires and rain flooding in several communities. Crops damaged by rain and hail.
Arizona, eastern two-thirds	13	Day			0	0	8,000	79,000	Tornadoes (suspected), hail, wind, rain, and electrical	Several funnel clouds from 1 main cloud north of White Tank Mountains about 10 a.m. Possible tornado at Queen Creek at 4:30 p.m., where $8,000 damage to buildings. Considerable hail damage to crops in Litchfield Park-Tolleson-Glendale sector.
Payson area, Ariz.	13	1 p.m.	25	*10			43,000		Wind, hail, rain, and electrical	High winds and hail (up to 3 inches in diameter) caused estimated $40,000 damage to buildings. 3 horses killed by lightning. Storm moved westward.
Cassia, Jerome, and Minidoka Counties, Idaho	13	2-4 p.m.	25	*5-8			25,000	10,000	Wind, hail, and rain	$10,000 reported crop damage was for Jerome County; no estimates of crop damage for Cassia and Minidoka Counties. Storm moved northeastward.
Lake City, Modoc County, Calif.	13	4 p.m.	6	1,000			10,000	15,000	Rain, wind, hail, and electrical	Cloudburst caused damages when tons of mud and debris washed down mountainside covering highway. Mud piled 6 to 7 feet deep and in some places alfalfa and grain fields washed away. Hail 6 to 10 inches deep in places up mountainside. Storm moved northward.
Coolidge-Casa Grande areas, Ariz.	13	4 p.m.	20	*20		2	50,000	150,000	Wind, hail, rain, and electrical	Injuries in Coolidge area as result of wind damage to buildings. Damage to crops result of hail. Storm moved north-northeastward.
Las Vegas (near), Clark County, Nev.	13	4:30-5:30 p.m.	15	*3 1/2			2,500,000	200,000	Rain and hail	Crop damage to gardens and vegetation, not field crops, mostly due to flooding but with some hail damage. Storm moved northeastward.
	13									Minor storm also reported near Hanover, Mont.
Water Valley to Calhoun City, Yalobusha and Calhoun Counties, Miss.	14	Early morning	29				40,000	10,000	Wind and hail	Severe thunderstorm uprooted trees, blew down garages and outbuildings, smashed windows, and leveled some crops. Storm moved southeastward.
Roy-Ogden area, Weber County, Utah	14	11:05 a.m.			0	0	0	0	Tornado (possible)	Reported by pilot, a CAA communicator, and a CAA ART employee as tornado. It did not reach ground. Tornado moved eastward.

See footnotes at end of table.

Table 4—Continued

Place	Date	Time	Length of path, miles	Width of path, yards	Number of persons		Estimated damage		Character of storm	Remarks
					Killed	Injured	Property (exclusive of crops)	Crops		
White, Carroll County, Ind.	14	3:15 p.m.	6	*2				$200,000	Hail	Hail, ankle deep over much of area of several thousand acres, riddled crops (wheat, oats, corn, and soybeans). Storm moved southward.
Post, Garza County, Tex.	14	3:55 p.m.	20	*1					Hail, wind, and rain	1,500 acres of cotton destroyed; damage to roofs of houses. Storm moved eastward.
Scipio, Pittsburg County, Okla.	14	4 p.m.			1		Minor	Minor	Electrical, wind, and rain	Man struck and killed by bolt of lightning as he worked in field, 17 miles northwest of McAlester. Storm moved southeastward.
Cheyenne and vicinity, Wyo.	14	Afternoon					$105,000	10,000	Rain and hail	Principal damage by flooded basements, washed out roads and bridges.
Lemhi County, Idaho	14	Afternoon				4			Electrical	2 men struck by lightning near Salmon, 1 requiring hospitalization; also same afternoon 2 men struck near Lemhi, both receiving burns but no permanent injuries.
Illinois, eastern portion	14	Afternoon						100,000	Hail	Hail accompanying scattered thunderstorms resulted in considerable damage to crops in counties near Indiana border from White County northward to Will County. Hail damage heaviest in White and Champaign Counties.
Knox, Lincoln, and Sagadahoc Counties, Maine	14	Afternoon and evening				2			Electrical and rain	2 West Bath residents stunned by lightning. Telephone services disrupted.
Rotan-Abilene areas, Fisher, Jones, and Taylor Counties, Tex.	14	6 p.m.	50	*20			50,000	20,000	Hail, wind, rain, and electrical	Heavy damage to buildings and cars in Rotan area. Storm moved southeastward.
Snyder, Kiowa County, Okla.	14	8-9 p.m.	15	500	0	0	30,000	15,000	Tornado (suspected), wind, hail, and rain	Farm buildings suffered greatest damage. Hail and wind damaged a few buildings and shrubs in City. Storm moved northeastward.
Brownwood area, Brown County, Tex.	14	11:15 p.m.							Wind, hail, rain, and electrical	Boat docks at Lake Brownwood heavily damaged; Lewis docks destroyed. Hail damage to roofs. Docks damaged earlier on June 4 and 6, but major damage seems to have climaxed on 14th.
Abernathy area, Hale County, Tex.	14	P.m.							Hail, wind, and rain	Spotted crop damage; from partial to complete destruction. Wind damage to garages and small buildings.
South Platte Valley, Colo.	14	P.m.	80	*60	1	5	1,000,000	Heavy	Rain and hail	Heavy rain accompanied by scattered hail over large portion of South Platte River Basin caused considerable damage to crops, especially sugar beets in Eaton-Longmont area. Runoff from Wildcat Creek drainage area washed out roadbed of Union Pacific railroad 6 miles east of Ft. Morgan, wrecking U.P. Challenger and causing death and injuries. Storm moved southeastward.
Geary, Blaine County, Okla.	14	Night					Minor	11,000	Wind, rain, hail, and electrical	Damage mostly from wind.
South Biscayne Bay, Fla.	14				1				Electrical	One of three fishermen in boat killed by lightning.
	14									Minor storms also reported near Vaughn and in Cascade County, Mont.; and at Nazareth, Tex.
Karns Spur area, Canadian County, Okla.	15	2:30-3:15 a.m.	4	*1			2,000	10,000	Wind, rain, hail, and electrical	Severe thunder and lightning. Some buildings unroofed. Wheat fields flattened by heavy rain, winds, and some hail. Storm moved southeastward.
Camas County, Idaho	15	10:30 a.m.			0	0	0	0	Tornadoes and rain	Newspaper account reported 2 small twisters in western Camas County. First funnel-shaped cloud about 300 feet in length, but did not reach ground; observed for about 10 minutes as it gyrated from perpendicular to near horizontal position. Second was smaller and disappeared in about 1 minute.
Port Sulphur (5 miles north of), Plaquemines Parish, La.	15	2 p.m.	3	330			5,000	Slight	Wind and hail	Hail up to 2 inches in diameter damaged windows and automobiles. Winds snapped telephone poles and unroofed a few houses. Storm moved northeastward.
Hugo (12 miles southwest of), Colo.	15	3:30 p.m.	10	*3			Moderate	Moderate	Wind and hail	Hailstones 1 to 2 inches in diameter. Storm moved southward.
Bannock County, Idaho	15	4-5 p.m.	7	*2-1/2				20,000	Hail and electrical	Storm moved northeastward.

See footnotes at end of table.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

Table 4—Continued

Place	Date	Time	Length of path, miles	Width of path, yards	Number of persons: Killed	Number of persons: Injured	Estimated damage: Property (exclusive of crops)	Estimated damage: Crops	Character of storm	Remarks
Slapout area, Beaver County, Okla.	15	4-5 p.m.	15	*5			$3,000	$15,000	Hail, wind, rain, and electrical	Property damage mostly to roofs of buildings due to hail. Storm moved eastward.
Wichita, Scott, Finney, Gray, and Meade Counties, Kans.	15	4-7 p.m.	100				100,000	315,000	Hail, wind, rain, and electrical	Hail, damaging winds, and torrential rains from northeastern Wichita County through Scott, Finney, and Gray Counties into northeastern Meade County caused heavy wheat losses, washed out newly-planted sorghums, and considerable miscellaneous damage to other properties. One of major damage areas centered around Scott City, Scott County, from 4:15 to 4:45 p.m., where 1/2 inch hail driven by winds estimated up to 80 m.p.h., and estimated 4 inches of rain in about 30 minutes brought almost total crop losses. Some hail drifts remained until 20th. Second area of severe damage occurred around Cimarron, Gray County, from 5 to 6:45 p.m., where excessive rains estimated at 5 to 10 inches washed out newly-planted fields and damaged railroads and highways. Many fields left covered with lakes of water. Basements in south part of Cimarron flooded. Storm moved southeastward.
Eastland, Eastland County, Tex.	15	5:30 p.m.	2	*2			500,000	100,000	Hail, wind, rain, and electrical	Hailstones, that averaged size of hens' eggs, with some as large as baseballs, damaged roofs, windows, and crops. Trees and telephone lines blown down. Storm moved southwestward.
Caddo-Breckenridge areas, Stephens County, Tex.	15	5:30 p.m.	15						Hail, wind and rain	90 percent of roofs in Caddo damaged.
Follett area, Lipscomb County, Tex.	15	6 p.m.	1	300			1,500	Considerable	Hail and wind	Granary destroyed, garage blown away, and small buildings destroyed. Crop damage by hail. Storm moved southwestward.
Rooks and Ellis Counties, Kans.	15	6-7 p.m.	25				1,500	100,000	Hail, rain, and wind	Damage extended from Yocemento, Ellis County, to Zurich, Rooks County. Hail caused 80 to 100 percent damage in some localities; stones up to golf-ball size and fell for an hour in some places. Heaviest losses and most intense rains occurred near Ellis-Rooks County line south of Zurich. Rainfall estimated at 3 to 8 inches in an hour caused flash floods, washed out bridges, and did much field damage.
Eastland and Comanche Counties, Tex.	15	6:30 p.m.					30,000		Wind, hail, electrical, and rain	In Gorman-Desdemona-DeLeon area. May be same as Eastland storm. Apparently advanced southeastward. Shattered plate-glass windows, unroofed sheds, and damaged awnings.
Shattuck, Ellis County, Okla.	15	6:45 p.m.	10	500	0	0	30,000	15,000	Tornadoes and hail	Considerable hail damage. 3 funnel clouds moving northeastward observed at one time.
Cheyenne, Roger Mills County, Okla.	15	7:30 p.m.					35,000	25,000	Hail, wind, rain, and electrical	Property damage mostly to roofs of buildings. Storm moved southeastward.
Arnett (near), Ellis County, Okla.	15	8 p.m.	5	500	0	0	25,000	40,000	Tornado, wind, rain, hail, and electrical	Tornado moving northeastward destroyed many farm buildings.
Kremlin, Garfield County, Okla.	15	8-9 p.m.	22-25	*2			8,000	25,000	Hail, electrical, and rain	Greater portion of damage done by hail. Storm moved southeastward.
Gilchrist area, Galveston County, Tex.	15	8:30 p.m.	1			2	10,000		Hail, wind, rain, and electrical	2 buildings unroofed. Hail damaged nearly all windows facing east; auto windshields and windows broken; neon signs damaged. Storm moved south-southwestward.
Enid, Garfield County, Okla.	15	10 p.m.	25	*10			50,000	75,000	Hail, wind, rain, and electrical	Reported as one of worst hailstorms to have occurred in this area. Storm moved southeastward.
Cresent, Logan County, Okla.	15	11 p.m.					40,000	100,000	Hail, wind, rain, and electrical	Some hailstones penetrated through roofs of buildings. Wheat damaged by hail. Storm moved eastward.
Graham area, Young County, Tex.	15	p.m.							Wind	Lumber company unroofed; house roofs damaged; radio tower destroyed.
Hastings (east of), Nebr.	15	p.m.					65,000		Electrical	Storage building in Naval Ammunition Depot struck and burned.
Brinkman and Hester, Greer County, Okla.	15	Night (p.m.)	15	*5			15,000	15,000	Hail, wind, rain, and electrical	Hail completely destroyed some unharvested wheat. Storm moved northeastward.

See footnotes at end of table.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

Table 4—Continued

Place	Date	Time	Length of path, miles	Width of path, yards	Number of persons		Estimated damage		Character of storm	Remarks
					Killed	Injured	Property (exclusive of crops)	Crops		
Martha, Blair, and Hester, Greer and Jackson Counties, Okla.	15	Night (p.m.)					$10,000	$30,000	Hail, wind, rain, and electrical	A few hailstones as large as hens' eggs observed. Storm moved eastward.
	15									Minor storms also reported in Mobile area, Ala.; at Fort Lauderdale, Fla.; at Clarkston, Westby, and Broadview, Mont.; at Spiro, Okla.; and near Gladewater and in Shepherd area, Tex.
Oklahoma City area, Oklahoma County, Okla.	15-16	11 p.m.-2 a.m.					$400,000	$600,000	Hail, rain, wind, and electrical	Several reports of hailstones as large as baseballs, some of which went through roofs of buildings. Area of greatest damage was strip about 1 mile west of Weather Bureau Airport Station. This area ranged from 1 to 4 miles wide and 8 miles long. Gust of wind of 107 m.p.h., from northwest observed at Weather Bureau Airport Station, at 12:08 a.m., on 16th. Cloudburst of 2.40 inches of rain fell in 20 minutes at airport station. Storm moved southeastward.
Claudell, Smith County, Kans.	15-16	11:45p.m.-a.m.	5	*3				50,000	Hail and rain	Hail and 4 to 5 inches of rain fell over 15-square mile area in about 40 minutes, causing very heavy loss to wheat and alfalfa. Hail 1/4 to 3/4 inch in diameter washed into large drifts which remained unmelted following afternoon. Corn and sorghums washed out or covered with mud. Storm moved northwestward.
Purcell area, McClain County, Okla.	16	Early morning					8,000	250,000	Hail, wind, rain, and electrical	Completely destroyed all crops in parts of this area. Storm moved southeastward.
Courtney, Love County, Okla.	16	Early morning	15	*5			2,500	150,000	Hail, wind, rain, and electrical	Damage mostly to corn crop. Storm moved southeastward.
Elmore City and Maysville, Garvin County, Okla.	16	1-2 a.m.					100,000	250,000	Hail, wind, rain, and electrical	Some hailstones as large as hens' eggs. Storm moved southeastward.
Gorman area, Eastland County, Tex.	16	1:20 a.m.			0	0	0	0	Tornado	Reported by State Police, reaching ground but no damage.
Spanish Fort, Montague County, Tex.	16	2 a.m.	3	*1 1/2			4,000		Hail, wind, rain, and electrical	Cotton and corn ruined; roof of home blown off; gardens damaged. Storm moved southward.
McPherson, McPherson County, Kans.	16	11:50 a.m.			0	0	0	0	Tornado (suspected)	Report received of tornado sighted, but no confirmation obtainable.
Fayette, Sanpete County, Utah	16	1 p.m.	3	400	0	0	5,000	0	Tornadoes	2 funnels observed in this area. Some large trees uprooted and large branches twisted and torn from all trees. Sheds damaged. Metal roofing carried across valley and wrapped around trees and posts. This funnel moved northeastward. The second funnel went north of town, moving eastward, but did no damage as it hit in undeveloped area.
Hitchcock County (northern portion), Nebr.	16	2:55 p.m.-midnight	25	*4			Light	200,000	Hail	Stones size of marbles.
Panhandle-Ashtola areas, Potter, Carson, Armstrong, and Donley Counties, Tex.	16	3:30 p.m.	1/4	60-70	0	2	15,000	12,000	Tornadoes, hail, wind, rain, and electrical	7 funnels reported. Heavy damage to roofs. Picked up truck with farmer in it; barn destroyed. Storm moved northeastward, then southward, then southeastward.
Nolan-Winters-Ballinger areas, Nolan, Taylor, and Runnels Counties, Tex.	16	3:30 p.m.	45	*4	0	0	500,000	100,000	Tornado, wind, hail, rain, and electrical	Tornado destroyed barn 6 miles west of Abilene. Hail damage extensive at Winters; windows and roofs of churches, hospitals, city hall, and public schools damaged. Storm moved southeastward.
Chase County, Nebr.	16	4-4:25 p.m.	10	*6			Light	40,000	Hail	Stones 1 inch in diameter.
Matador, Motley County, Tex.	16	4:30 p.m.							Hail, wind, and rain	Hail damaged crops. Several houses and automobiles received hail damage. Some crops blown from ground. Storm moved southwestward.
Higgins (13 miles southsouthwest of), Hemphill County, Tex.	16	5 p.m.	4	*3/4	0	0	8,000	0	Tornado, hail, and rain	Windmills damaged. Storm moved eastward.

See footnotes at end of table.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

Table 4—Continued

Place	Date	Time	Length of path, miles	Width of path, yards	Number of persons		Estimated damage		Character of storm	Remarks
					Killed	Injured	Property (exclusive of crops)	Crops		
Junction, Kimble County, Tex.	16	5 p.m.					$8,500	$10,000	Wind and rain	2 hangers wrecked; 5 light planes damaged. Storm moved southward.
Sadorus community, Champaign County, Ill.	16	Afternoon					1,000	15,000	Hail	Hail several inches in depth accumulated over very small area.
New England, coastal sections	16	Afternoon and evening				2	30,000		Electrical, rain, and hail	Thunderstorms struck several Maine and Massachusetts coastal areas. 2 men struck by lightning at Dartmouth, Mass. Several lightning fires set in scattered communities. Heavy crop damage in Rhode Island and southeastern Massachusetts.
Big Timber, Sweet Grass County, Mont.	16	6 p.m.					10,000		Hail, rain, and electrical	Nearly 2 inches of hail covered streets immediately after storm and some had not melted by noon next day. Roofs and sidings of houses damaged.
Arnett area, Ellis County, Okla.	16	6-7 p.m.			0	0	15,000	Minor	Tornado, electrical, wind, rain, and hail	Farm home west of Arnett set on fire by lightning. Storm moved northeastward.
Guymon, Texas County, Okla.	16	7-8 p.m.			0	0	Minor	$20,000	Tornado (suspected), wind, hail, and rain	Funnel cloud not observed on ground. Damage caused by wind and hail.
Enid area, Garfield County, Okla.	16	8-9 p.m.	10	*2			1,000	20,000	Hail, wind, rain, and electrical	Large acreage of uncut wheat completely destroyed. Storm moved southeastward.
Ozona area. Crockett County, Tex.	16				0	0			Tornado (suspected)	Reported to have struck 3 ranches, destroying a barn and damaging 1 room of home.
Haskell, Haskell County, Tex.	16				0	0	0	0	Tornado	Tornado observed not touching ground.
	16									Minor storms also reported at Coats, Kans.; and near McCook, Nebr.
West Palm Beach (5 miles south of), Fla.	17	11:15 a.m.			0	0	0	0	Tornadoes	2 funnel clouds from same shower cloud did not reach ground; moved eastward.
Northeastern Wayne and southern Dixon Counties, Nebr.	17	1 p.m.	10	40	0	0	4,000	Light	Tornado	Several persons observed funnel cloud moving northeastward. Most of path through open fields.
Gray, Meade, Clarke, and Comanche Counties, Kans.	17	1:30 p.m.			0	0	25,000	20,000	Tornadoes, hail, rain, and wind	A number of tornado funnels, some touching ground, sighted during early afternoon. 4 distinct funnels seen from Meade. Several damaging funnels crossed Fowler area, damaging a number of buildings and demolishing 1 farmstead. Another funnel touched down about 7 miles south of Mineola and moved eastward demolishing 1 farmstead and damaging others. Unconfirmed funnel reported 23 miles south-southeast of Garden City at 2:35 p.m. Considerable damaging hail and heavy rain accompanied tornadoes, especially south of Mineola, Clark County, and in Commanche County.
Alliance (near), Nebr.	17	2:30-4 p.m.	Short		0	0	0	0	Tornado	Funnel observed; struck nothing of value.
Perryton (15 miles east of), Ochiltree County, Tex.	17	3:03 p.m.			0	0	0	0	Tornado	Funnel cloud moving northeastward, but not reaching ground, reported by highway patrol.
White Deer (8 miles southeast of), Carson County, Tex.	17	3:28 p.m.			0	0	0	0	Tornado	Tornado observed not reaching ground.
Lenoir County, N.C.	17	4 p.m.						15,000	Hail	
Smith County (northern portion), Kans.	17	4-6 p.m.					20,000	40,000	Hail, rain, and wind	Heavy rains and hail caused much field and crop damage and washed out culverts and fences. Damaging hail fell in Womer-Thornburg area.
Alva, Woods County, Okla.	17	5-6 p.m.	2-4	500	0	0	15,000	2,500	Tornado, wind, rain, and electrical	Tornado damage to farm buildings in several places. Storm moved northeastward.

See footnotes at end of table.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

Table 4—Continued

Place	Date	Time	Length of path, miles	Width of path, yards	Number of persons		Estimated damage		Character of storm	Remarks
					Killed	Injured	Property (exclusive of crops)	Crops		
Ringwood (northeast of), Major County, Okla.	17	5:48 p.m.	1	Narrow	0	0	$ Minor	$ Minor	Tornado, wind, rain, and hail	Tornado moving northeastward observed on ground by State highway patrolman.
Loyal area, Kingfisher County, Okla.	17	6-7 p.m.	15	*4-5			10,000	1,000	Wind, rain, hail, and electrical	Many farm buildings damaged. Storm moved southeastward.
Anthony area, Harper County, Kans.	17	6:30 p.m.			0	0	0		Tornado, hail, wind, and rain	Funnel aloft reported 6 miles northwest of Anthony. Considerable hail damage north of Anthony.
Erick, Beckham County, Okla.	17	6:30-6:45 p.m.			0	0	Minor	Minor	Tornadoes (suspected) and wind	One report states that 2 funnels observed on ranch 2 miles from city. Storm moved northeastward.
Enid, Garfield County, Okla.	17	7-7:30 p.m.	20	*4	1	7	50,000	10,000	Wind, rain, hail, and electrical	Child killed and 7 persons injured in two-car collision during heavy rain-and windstorm. Storm moved southeastward.
Wellington area, Collingsworth County, Tex.	17	7:10 p.m.	10-15	*1-1/2	0	2	500,000	0	Tornado (suspected), hail, wind, and rain	Some reports of funnel (may have been squall-line cloud) 3 homes destroyed; 6 to 10 business buildings damaged. Storm moved southeastward.
Aline area, Alfalfa County, Okla.	17	8-9 p.m.	1	100	0	0	5,000	4,000	Tornado, hail, and wind	Crop damage caused by hailstorm. Barn unroofed, trees uprooted, and fence blown away; several small buildings destroyed on farm 11 miles southeast. Storm moved northeastward.
Oklahoma City area, Oklahoma County, Okla.	17	8:30-9 p.m.	20	*3	0	0	15,000	25,000	Tornadoes (suspected), wind, rain, hail, and electrical	2 funnel clouds aloft moving northeastward.
Hobart (near), Kiowa County, Okla.	17	8:40-8:50 p.m.	1/2	50	0	0	Minor	Minor	Tornadoes, wind, rain, hail, and electrical	3 funnel clouds aloft observed moving east-northeastward. 1 cloud probably touched ground near Lugert.
Chickasha area, Grady County, Okla.	17	9-10 p.m.			0	0	25,000	30,000	Tornado (suspected), electrical, wind, rain, and hail	Funnel cloud sighted aloft north of Chickasha. Lightning struck and set fire to hay barn near village of Amber. Lightning struck numerous utility powerlines in Chickasha, and also several nearby farm buildings. Storm moved northeastward.
Ringgold, Montague County, Tex.	17								Electrical	Lightning struck barn, destroying 3,000 bales of hay, tractor, power saw, and other equipment.
	17									Minor storms also reported in Cherokee County, Iowa; and at Guthrie, Enid, Seminole, Hobart, Holdenville, and near Yukon, Okla.
Wynnewood area, Garvin County, Okla.	17-18	11 p.m.-2 a.m.	40	*2	0	0	260,000	50,000	Tornado (suspected), wind, hail, rain, and electrical	Funnel cloud reported west of Wynnewood. Greater portion of damage by wind and hail. Storm moved southeastward.
Mineral Wells (near), Palo Pinto County, Tex.	18	2 a.m.					10,000		Wind and electrical	Lightning struck drive-in theatre west of Mineral Wells.
Carey-Kirkland area, Childress County, Tex.	18	2 a.m.	8				4,000	40,000	Wind, hail, electrical, and rain	Buildings unroofed and destroyed. Storm moved southward.
Cleburne, Johnson County, Tex.	18	3:30 a.m.					150,000		Wind and rain	Plate-glass windows broken; 1 hangar destroyed; plane damaged. Storm moved southward.
Palacios (20 miles southwest of), Calhoun County, Tex.	18	7:38 a.m.			0	0	0	0	Tornadoes	3 funnels moving south-southeastward sighted, did not reach ground.
West Palm Beach, Fla.	18	11 a.m.			0	0	Minor	0	Waterspouts, wind, and rain	2 waterspouts formed under thunderstorm cloud after cloud moved offshore.
Haxtun, Phillips County, Colo.	18	12:30 p.m.	3/4	80	0	0	250,000	0	Tornado and hail	Tornado moving eastward destroyed several buildings, uprooted trees, and killed livestock.
Star Lake and Dead Lake, Ottertail County, Minn.	18	1 p.m.			0	0		0	Tornado (suspected), wind, and rain	All buildings except house demolished on farm. Water in Star and Deal Lakes drawn up to height of 40 feet. Rowboat at anchor lifted into air and blown into field. Outbuilding at boathouse carried away. Trees uprooted.

See footnotes at end of table.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

Table 4—Continued

Place	Date	Time	Length of path, miles	Width of path, yards	Number of persons		Estimated damage		Character of storm	Remarks
					Killed	Injured	Property (exclusive of crops)	Crops		
Happy, Swisher County, Tex.	18	4:07 p.m.			0	0	$0	$0	Tornadoes, wind, rain, and hail	2 funnels observed by highway patrol. No reports of damage.
Canyon (11 miles southwest of), Randall County, Tex.	18	4:10 p.m.			0	0	0	0	Tornadoes	2 funnels reported by sheriff's office. No damage reported.
Cherokee, Alfalfa County, Okla.	18	5-6 p.m.	2	100	0	0	2,500	1,000	Tornadoes (suspected), wind, rain, and hail	Funnels observed by several persons; moved northeastward.
Alva area, Woods County, Okla.	18	5-6 p.m.	15	*5			1,500	15,000	Hail	Hail heavy in some sections. Storm moved southeastward.
Bradenton, Fla.	18	6 p.m.				1			Wind, electrical, and rain	Personal injury due to lightning. TV antennas damaged, trees broken and some uprooted. Wire lines damaged by lightning.
Floyd, Hale, Crosby, and Swisher Counties, Tex.	18	7 p.m.	60	*15	0	5	265,000	1,500,000	Tornado, wind, hail, rain, and electrical	Includes Aiken, Lockney, Plainview, Petersburg, Cone, Ralls, Crosbyton, and Kress. Tornado seemed to be confined to small area around Ralls and Cone; balance of storm area was straight-line wind. Hail damage extensive to both crops and buildings. Storm moved southeastward.
Freedom (near), Woods County, Okla.	18	7-8 p.m.	3	100	0	0	25,000	1,000	Tornado, wind, rain, and hail	Tornado moving northeastward, destroyed several farm homes and buildings.
Muleshoe (20 miles north-northeast of), Parmer County, Tex.	18	7:05 p.m.			0	0	0	0	Tornado	Pilot reported signs of tornado in open country (unconfirmed).
Kansas, western portion	18	7:28 p.m.			1	0		0	Tornadoes (suspected), wind, rain, and electrical	Unconfirmed funnels aloft moving eastward 10 miles south of Oakley. Squall line with severe thunderstorms moved through western Kansas during evening. 5 Navy jet aircraft on flight from Dallas to Denver unable to navigate storms and made emergency landings at scattered places in western Kansas and extreme eastern Colorado with 1 pilot losing his life.
Stratford, Sherman County, Tex.	18	8 p.m.			0	0		0	Tornadoes	3 funnels reported; apparently touched ground in open country; moved northeastward.
Spur area, Dickens County, Tex.	18	8:42 p.m.			0	0	0	0	Tornado	Funnel sighted by aircraft.
Fate area, Rockwall County, Tex.	18						2,000		Electrical	Lightning destroyed a barn and contents of 8 tons of baled oats.
	18									Minor storms also reported at Roland, Iowa; in Cumberland County, N.C.; at McLoud, Woodward, and Laverne, Okla.; and at Glen Rose, Tex.
Donley and Hall Counties, Tex.	19	2 a.m.	42	*5			200,000	200,000	Wind, hail, rain, and electrical	Barns unroofed. Hail damage heavy to crops and windows. Much damage in vicinities of Clarendon, Lakeview, and Memphis. Storm moved southeastward.
Eastern Custer and northwestern Caddo Counties, Okla.	19	2-3 a.m.	25	300	0	0	1,000	5,000	Tornadoes, hail, wind, rain, and electrical	2 funnel clouds reported at Lake Clinton, 1 near Butler, 1 north of Weatherford, and 1 near Hydro. Greater portion of damage due to hail. Storm moved northeastward.
Childress-Quanah areas, Childress and Hardeman Counties, Tex.	19	4 a.m.	35	*10	3		31,000	Considerable	Wind, electrical, and rain	3 children drowned in storm cellar, when father opened door to cellar near Quanah. Storm moved southeastward.
Archer, Archer County, Tex.	19	7:30 a.m.				2			Electrical	2 men injured when struck by lightning. Residence burned to ground.
Iowa, all sections	19	All day					500,000	1,000,000	Thunderstorms with hail	Damaged crops and buildings.
Campo, Colo.	19	12:30 p.m.		*3			Moderate	25,000	Rain and hail	Hailstones to 1 inch in diameter. Windows broken and roofs and automobiles damaged. Storm moved southeastward.
Rapid City, Pennington County, S. Dak.	19	2:08 p.m.			0	0	0	0	Tornado	Tornado funnel cloud observed by meteorologist at Rapid City. No damage since cloud did not reach ground.

See footnotes at end of table.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

Table 4—Continued

Place	Date	Time	Length of path, miles	Width of path, yards	Number of persons		Estimated damage		Character of storm	Remarks
					Killed	Injured	Property (exclusive of crops)	Crops		
Rapid City, Pennington County, S.Dak.	19	2:23 p.m.			0	0	$ 0	$0	Tornado	Tornado funnel cloud observed by meteorologist at Rapid City. No damage since cloud did not reach ground.
Boyne Falls, Mich.	19	3:30 p.m.	3	50	0	0	2,500	500	Tornado (suspected), wind, rain, hail, and electrical	Roof of service station twisted loose, silo moved off its foundations, and small building destroyed. 1 person said storm "looked like smoke from stack of a train". Rain, hail, and lightning followed storm. Storm moved northeastward.
Illinois, central portion	19	Afternoon						150,000	Hail	Hail accompanying local thunderstorms caused crop damage in belt extending from Hancock and Adams Counties eastward to Menard and Logan Counties then northeastward across McLean and Livingston Counties to Will County. Hail size of hens' eggs reported in 24-square mile area near community of Bently in Hancock County.
Williamstown area, Lewis and Clark Counties, Mo.	19	4 p.m.	8-10	*1/2			1,000	36,000	Hail, wind, and rain	Hailstones near 1 inch in diameter piled up to depth of 2 to 3 feet along small stream; hail on ground for 3 days in some places. Storm moved southeastward.
Stinnett, Hutchinson County, Tex.	19	4:30 p.m.					28,000		Hail and rain	Damaged roofs, windows, and screens. Storm moved southwestward.
Campo (10 miles northwest of), Baca County, Colo.	19	5:30 p.m.			0	0	0	Light	Tornadoes and dust	Funnel dropped from cloud, appeared not to touch ground, but whirling dust plume below on ground indicated it had. A few seconds thereafter gap between dust and funnel closed by streamer. Storm moved eastward for perhaps 1/2 minute, then lifted with tail curving and dragging briefly, than all signs disappeared. 3 other small funnels occurred, reported to have touched ground.
Pattonsburg (near), Davies County, Mo.	19	5:30 p.m.	2 1/2	*2			Slight	Considerable	Hail and rain	Hail covered ground to depth of 2 inches in some places.
Stratford (10 miles north of), Sherman County, Tex.	19	5:35 p.m.			0	0			Tornado	State highway patrol reported definite path on ground.
Maxwell (near), Nebr.	19	Late afternoon					Light	Several thousand	Hail	Stones up to 2 1/2 inches in diameter.
Tahoka (20 miles northwest of), Lynn and Lubbock Counties, Tex.	19	6 p.m.	15	*3					Hail and rain	Destroyed 5,000 acres of cotton. Storm moved northeastward.
Amarillo area, Potter County, Tex.	19	6:33 p.m.	11	*3-1/2			2,100,000		Hail, rain, and electrical	Most widespread and heaviest hail damage in history of Amarillo. Damage to 6,000 dwellings and 1,500 cars. Average damage of $325 per building and $125 per car. Hail as large as baseballs. Storm moved south-southwestward.
California (north of), Moniteau County, Mo.	19	Evening					Slight	Considerable	Hail and rain	Considerable damage to gardens and some other crops.
Sudan (5 miles northwest of), Lamb County, Tex.	19								Hail and wind	2,000 acres of cotton damaged.
	19									Minor storms also reported in Grundy County, Iowa; in Osage and Miami Counties, Kans.; near Ripley, Miss.; in Springfield area and near Avalon and Kahoka, Mo.; near Stapleton, Nebr.; and at Longview, Tex.
Michigan, entire State	19-21				1	8	250,000	350,000	Wind, hail, electrical, and rain	Thunderstorms began on afternoon of 19th and ended in southeastern Lower Michigan on morning of 21st. Often accompanied by strong winds, frequent lightning, heavy rain, and occasionally hail. Storms occurred most frequently on 20th. Winds estimated at nearly 100 m.p.h., damaged an airport near Alpena on 19th. Heavy hail damage occurred in Benzie County on night of 20th, when hail of golf-ball size ruined some fruit orchards, losses estimated at $300,000. Boy killed by lightning near East Tawas on afternoon of 20th. Lightning also killed a number of livestock, damaged many buildings, and set several fires at scattered localities around State. Some flooding also reported in heavy thundershowers.
Van Zandt and Henderson Counties, Tex.	20	1 p.m.	4	*1-1/8			5,500	20,000	Wind, hail, rain, and electrical	Hail occurred in northern Henderson County about 1 p.m., and along Van Zandt-Henderson County line about 2:30 p.m. Hailstones 1 to 4 inches in diameter. Storm

See footnotes at end of table.

Table 4—Continued

Place	Date	Time	Length of path, miles	Width of path, yards	Number of persons		Estimated damage		Character of storm	Remarks
					Killed	Injured	Property (exclusive of crops)	Crops		
Texas (Cont'd)										moved southeastward.
Vineland, Colo.	20	2:30 p.m.					$ Light	$ Heavy	Hail and rain	Hailstones 1/2 inch in diameter.
Brooken and Cottonwood communities, McLennan County, Tex.	20	3 p.m.			0	0			Tornadoes, electrical, and rain	Lightning struck barn which burned along with contents (185 bales of clover, some cottonseed, and a large cotton trailer). 2 small tornadoes apparently did no damage, dancing through open field.
Merrill, Lincoln County, Wis.	20	3:15 p.m.	3	*1 1/8			5,000	Moderate	Hail, wind, and rain	Hail large as ice cubes stripped trees of leaves and fruit, flattened gardens and flower beds, broke several windows in homes and 200 greenhouse windows. Fallen leaves plugged storm sewers and caused water to back up, flooding some basements. Several cars slightly damaged by hail. Some hail still unmelted next morning. Storm moved westward.
Cumberland and Oxford Counties, Maine	20	Afternoon				3	1,500		Electrical, wind, rain, and hail	Lightning set fire to summer camp in Otisfield. Sailboats overturned in Portland Harbor. Widespread power failure.
Saunders County, Nebr.	20	5-6 p.m.	10-20	*3				Considerable	Hail	Damage spotted. Stones up to 1 inch in diameter.
	20									Minor storms also reported at Alquina, near Whitestown, and in Decatur County, Ind.; and in northern Iowa.
Gregory (near), Nueces County, Tex.	21	7:55 a.m.			0	0	0	0	Waterspout	Waterspout over Corpus Christi Bay about 3 miles offshore near Gregory, lasted 20 minutes.
Corpus Christi (4 1/2 miles south of), Nueces County, Tex.	21	10 a.m.			0	0	0	0	Tornado and rain	Tornado funnel, not touching ground, observed 4 1/2 miles south of Cabaniss Field.
Ingleside (10 miles north of), Aransas County, Tex.	21	10:50 a.m.			0	0			Tornado	Pilot reported funnel cloud touching ground. Postmaster unable to obtain any evidence of damage.
Columbus, Ohio	21	2:45 p.m.	7	*1	0	0	1,000		Hail	Hailstones up to size of golf balls reported from northern and eastern sections of Columbus, while smaller hail reported along path of 15 miles or more length. Damage mainly to gardens, rose and other bushes, trees, neon signs, and a few windows. Severe thunderstorms reported also over large area from Dayton to beyond Columbus.
Fort Pierce, Fla.	21	3:30 p.m.				1			Electrical	Lightning damaged wiring and light fixtures of 1 home. Personal injury, minor wound from glass shattered by lightning.
Miami (7 miles north of), Fla.	21	4 p.m.			0	0	0	0	Tornado	Tornado cloud, moving northeastward, did not reach ground.
Nash and Pender Counties, N.C.	21	4-5 p.m.						30,000	Hail	Most damage to tobacco in fields.
Kansas, east-central portion	21	Afternoon			0	0	3,000	30,000	Tornado (suspected), hail, and rain	Pilot reported tornado 10 miles north of Gypsum, Saline County, touching ground in open country and moving east-northeastward at 1:35 p.m. Damaging hail at scattered places in Geary, Wabaunsee, Lyon, and Linn Counties during afternoon and early evening, with heaviest hail reported over limited areas near Junction City and Emporia.
Osceola (near), St. Clair County, Mo.	21	Afternoon					3,500	25,000	Hail, electrical, and rain	Spotty falls of hail; stones 1/4 to 1 inch. About $2,000 lightning damage included in total. Storm moved southward.
Connecticut, Rhode Island, and western and central Massachusetts	21	Afternoon			1	4	30,000	Considerable	Electrical, rain, and hail	Tobacco crop damaged by hail size of golf balls in Connecticut. Streets and cellars flooded in Rhode Island. Lightning and flood damage in Massachusetts.
Coal Hill and North White Oak areas, Johnson County, Ark.	21	5:30 p.m.					5,000	100,000	Hail, electrical, wind, and rain	Lightning struck 1 house at Coal Hill with total loss. Worst damage in North White Oak area where hail damaged corn, tomatoes, beans, and oats.
Holbrook, Grant County, Ky.	21	P.m.			1				Electrical	Fatality result of being struck by lightning.

See footnotes at end of table.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

Table 4—Continued

Place	Date	Time	Length of path, miles	Width of path, yards	Number of persons		Estimated damage		Character of storm	Remarks
					Killed	Injured	Property (exclusive of crops)	Crops		
Sileston, Canalou, and Charter Oak, Scott County, Mo.	21	Evening					$ Slight	$ Considerable	Hail, wind, and rain	Some stones size of golf balls. 250 acres of cotton partly destroyed.
Campo and vicinity, Colo.	21		12	*2-1/2			Light	Moderate	Hail, wind, and rain	Losses mostly to sorghum, broomcorn, and grain crops; some damage to roofs. Storm moved eastward.
	21									Minor storms also reported at Murphysboro, Ill.; near Indianapolis, Ind.; at Kipling, Miss.; near Boston, Mo.; and near Stella, Nebr.
Corson, Sully, and Potter Counties, S. Dak.	21-22	Night							Hail, wind, rain, and electrical	Most damage in Corson County. Losses reported to insurance companies reached 100 claims.
New Jersey	22	4 a.m.					35,000		Electrical and wind	Violent electrical storms struck in Passaic, Bergen, Morris, and Essex Counties. 23 homes struck by lightning and damaged in area including some at Little Falls, Lyndhurst, Paramus, Buttler, Pompton Lakes, and Wanaque. Wind strong, uprooting trees in places. Much disruption of electric service. About 4 a.m., large barn near Scotch Plains struck by lightning and mostly destroyed including hay and machinery but no livestock; loss over $10,000.
Irwin (near), Barton County, Mo.	22	1 p.m.	10	*1			Slight	10,000	Hail and rain	Storm moved eastward.
Knoxville, Knox County, Tenn.	22	1:15 p.m.					20,000		Wind, rain, hail, and electrical	Severe thunderstorm struck city knocking down signs and powerlines. Lutheran church destroyed with damage estimated at $20,000.
Okmulgee, Okmulgee County, Okla.	22	1:30-2:30 p.m.	15	*5			10,000	15,000	Hail, electrical, wind, and rain	Greater portion of damage caused by hailstorm. Lightning damaged some utility lines. Storm moved southeastward.
Washington, D.C., and vicinity	22	2-4 p.m.					15,000		Wind and electrical	
Franklin, Lee, Wake, Hoke, Forsyth, and Rockingham Counties, N.C.	22	2-9 p.m.					5,000	59,800	Hail	Most damage to tobacco in fields.
New England, all sections	22	Afternoon			1	4	30,000	Considerable	Hail, wind, rain, and electrical	Hail size of golf balls in Middlesex County, Mass. Winds to 70 m.p.h., at Rutland, Vt. Widespread lightning damage in all States. Hay damaged considerably.
Wills Point (6 miles southwest of) Van Zandt County, Tex.	22	3 p.m.	3	*1-1/8			10,500	10,000	Wind, hail, rain, and electrical	Roofs, outhouses, and crops damaged by wind and hail. Hailstones 1 to 5 inches in diameter. Storm moved southeastward.
Ardmore, Carter County, Okla.	22	3-4 p.m.	15	*5			20,000	15,000	Electrical, hail, wind, and rain	Lightning damaged utility lines, while hail destroyed some crops. Storm moved southeastward.
Robstown (near), Nueces County, Tex.	22	3:15 p.m.			0	0			Tornado, wind, rain, and electrical	Roof and 1 wall blown off small shed about 1 mile from farm where hog pen destroyed, but nearby sheds unscathed. Storm moved eastward.
Ripley, Tippah County, Miss.	22	4-4:30 p.m.					2,000	8,000	Wind and hail	
Wilmington, Del.	22	4-5 p.m.			1		5,000		Wind and electrical	Miscellaneous wind and lightning damage.
Kansas, southeastern portion	22	5 p.m.					1,000	15,000	Hail, wind, and rain	Local damaging hail fell from heavy thunderstorms. Damages reported from Allen, Neosho, and Labette Counties.
Gage (near), Ellis County, Okla.	22	9 p.m.			0	0	0	Minor	Tornado (suspected), wind, rain, and hail	Funnel cloud observed on ground about 12 miles north of Gage, moving northeastward.

See footnotes at end of table.

Table 4—Continued

Place	Date	Time	Length of path, miles	Width of path, yards	Number of persons		Estimated damage		Character of storm	Remarks
					Killed	Injured	Property (exclusive of crops)	Crops		
Hale Center to Cotton Center, Hale County, Tex.	22	10:15 p.m.	12	*4					Hail and rain	Hail damaged several thousand acres of young cotton and feed over area about 4 by 12 miles. Piles of hail that resembled snowdrifts still remained following morning. Storm moved southwestward.
Calvert area, Robertson County, Tex.	22	P.m.							Wind, hail, and rain	In Black Bridge community (west of Calvert) to Calvert, high winds and hail caused considerable property and crop damage.
Isle Royale, Lake Superior, Mich.	22				2				"Seiche" wave	Believed to be "Seiche" wave; occurred on inland lake on Isle Royale. 2 men drowned when sudden, huge wave upset their small boat. Lake calm before and after wave occurred. Third man rescued after 2 hours in water.
Houston, Chickasaw County, Miss.	22						$5,000	$10,000	Wind, hail, and rain	
Quitman and Panola Counties, Miss.	22		30		0	0	35,000	15,000	Tornado (suspected)	4 homes and 1 building destroyed and 14 others damaged. Tornado moved northeastward.
	22									Minor storms also reported at Huntsville, Ala.; at Tampa, Fla.; and at Cambridge, Md.
Flathead County, Mont.	22-23	7:45 p.m.-a.m.	+50-60				500	10,000	Wind, rain, hail, and electrical	In vicinity of Kalispell storm covered area from Thompson Lakes to near West Glacier. About 2,000,000 board feet of timber blown down by wind, but most of it can be salvaged. Storm moved eastward.
Custer County (northern portion), Nebr.	23	6 a.m.	7	*1			Light	5,000	Hail	Stones size of marbles to golf balls.
West of Loup City to west of Arcadia, Nebr.	23	11 a.m.-12:20 p.m.	30	*2				25,000	Hail	Damage spotted. Stones small, but considerable wheat shattered.
Whitfield County (northern portion), Ga.	23	1 p.m.					1,000	5,000	Hail and wind	Severe thunderstorm (damage mostly from hail, but partially from wind). High wind damaged several house roofs and small buildings, 240 chickens lost. Hail, ranging in size from small marbles to guinea eggs, overspread much of northern Whitfield County, north of Cohutta, causing substantial losses to cotton, corn, alfalfa, and grapes. Storm moved eastward.
Varner (near), Lincoln County, Ark.	23	1 p.m.	Short	Narrow	0	0	2,000	0	Tornado (suspected), rain, and electrical	Barn unroofed, resulting in damage to 1,000 bushels of oats by rain that followed.
Pamlico, Bladen, Duplin, Onslow, Pender, Bertie, Edgecombe, Nash, Franklin, Johnston, Lee, Robeson, Sampson, Wake, Warren, Hoke, Richmond, Scotland, Polk, Rockingham, and Alamance Counties, N.C.	23	2-5 p.m.					28,900	1,617,100	Hail and rain	Frontal passage again caused widespread thunderstorms with hail and some wind damage. Three-fourths of crop damage to tobacco in fields.
Elbert County, Ga.	23	2:30-3:10 p.m.	15	*1-1/2			2,000	25,000	Wind, hail, rain, and electrical	Path of storms extended from near Nickville (6 miles west of Elberton) through Centerville (5 miles north-northwest of Elberton) and beyond Rock Branch community (9 miles north-northeast Elberton). In Nickville and Centerville areas, a few house roofs damaged and some trees and utility lines blown down, while considerable damage, mostly from heavy hail, occurred over about 2-square mile area near Rock Springs community. Crops heavily damaged from hail, and high winds caused moderate to heavy damages to homes, barns, and other buildings. Large acreages of cotton, corn, grain, watermelons, etc., badly beaten, leaving total losses in several fields. High winds heavily damaged or blew over more than a dozen barns, numerous house roofs and other buildings damaged, and considerable grain stored in barns blown away or ruined by heavy rains. Storm moved northeastward.
Lowndes County (northern portion), Miss.	23	3 p.m.					5,000	10,000	Wind and hail	

See footnotes at end of table.

Table 4—Continued

Place	Date	Time	Length of path, miles	Width of path, yards	Number of persons		Estimated damage		Character of storm	Remarks
					Killed	Injured	Property (exclusive of crops)	Crops		
Anderson area, Anderson County, S.C.	23	3-4 p.m.	6-10	*3			$3,000	$50,000	Hail, wind, rain, and electrical	In Bowen-Hebron, Good Hope, and Generostee communities about 12 miles southwest of Anderson, S.C., hailstorm did bulk of damage to crops and houses in midafternoon, preceded and followed by torrential rains which continued during night. Hail lasted about 15 to 20 minutes, in most sections, and stones as large as hens' eggs fell throughout the 3 communities. Banks of ice 6 to 8 inches deep remained in deep grass and along banks and buildings as long as 3 hours after storm. Storm moved northeastward.
New Hope area, Florence County, S.C.	23	3:30 p.m.	2 1/2	*1				150,000	Hail, wind, rain, and electrical	Major damage to tobacco. Storm moved southeastward.
Pamplico eastward to Pee Dee River, Florence County, S.C.	23	4 p.m.	2	*1				40,000	Hail, wind, rain, and electrical	Major damage to tobacco. Storm moved southeastward.
Spartanburg (near), Spartanburg County, S.C.	23	4 p.m.					100,000		Electrical, rain, and hail	Lightning struck lumber-treating plant.
Anderson, Anderson County, S.C.	23	4 p.m.	**300	100	0	0	3,000		Tornado, wind, rain, and hail	Tornado that developed during thunderstorm was described as rapidly moving revolving funnel. It snaked down out of black cloud, making contact with ground, knocked down a barn and garage, uprooted several trees, then lifted after 200 or 300 yards. Tornado moved northeastward.
Hennessey, Kingfisher County, Okla.	23	4:30 p.m.	25	*10			Minor	305,000	Hail, rain, wind, and electrical	Large hailstones reported. Up to 12 inches of rain fell in small areas. Storm moved northeastward.
Hoskins (near), Nebr.	23	Afternoon			1				Electrical	Farmer on tractor struck and killed.
Pittsylvania, Prince George and Charles City Counties, Va.	23	Afternoon	2-12	*1/4-1			Considerable	25,000	Hail, wind, and rain	Considerable property damage by wind. Storm moved southeastward in Pittsylvania County, northward in Prince George County, and north-northwestward in Charles City County. Severe hail in 3 counties.
Levelland, Hockley County, Tex.	23	11:25 p.m.			0	0			Tornado	Tornado funnel, not touching ground, reported.
Laurel, Md.	23	P.m.					10,000		Electrical	Lightning set fire to building.
East of Columbia River, Wash.	23	Evening		*100		2	250,000	25,000	Wind and dust	High wind and duststorm associated with rapidly moving frontal system across eastern part of State. Wind speeds ranging from 50 to 70 m.p.h., caused severe duststorm in Columbia Basin, making it necessary to close several highways to travel for a few hours and caused small airplane to crash near Sprague, injuring 2 persons. 1 warehouse wrecked in Moses Lake area, and trees and power and communication lines damaged over wide area. Storm moved eastward.
	23									Minor storms also reported at Hartselle and near Moulton, Ala.; at Paragould, Almyra, and in Benton County, Ark.; at Jacksonville, Fla.; at Atlanta and Macon, Ga.; at Council Bluffs, Iowa; near Sikes, La.; near Charleston, Mo.; at Stevensville, Mont.; near Marquette and York, in eastern Seward County, and in northwestern Pawnee County, Nebr.; at Charleston, S.C.; and at Kingsport, Tenn.
Lancaster County (southern and western portions), Nebr.	23-24	9:30 p.m.-2:30 a.m.	8	*2-3			2,500	255,000	Hail and electrical	Stones 1 inch in diameter. Property damage by lightning, crop by hail.
New Jersey	23-24	P.m. 23d-p.m. 24th					25,000	25,000	Hail and electrical	Lightning struck at 22 places in Union County including buildings in Westfield, Cranford, Scotch Plains, Linden, and Elizabeth, causing 5 fires. Same series of storms covered Bergen and Passaic Counties. In Bergen County, 14 homes reported struck by lightning and damaged or destroyed. In Passaic County on 24th, a little before 8 p.m., heavy hail fell for about 15 minutes at Paterson, Clifton, and Passaic during thunderstorms. Very damaging to truck crops in vicinity of Clifton. County Agricultural Agent estimated damage to crops in Passaic County to be $25,000. Such crops as cabbage and head lettuce almost completely ruined over large acreage. Damage to property mostly by lightning.
Lackawanna County, Pa.	24	A.m.-p.m.						25,000	Hail	Hail caused extensive damage to blueberry crop. Storm moved eastward.

See footnotes at end of table.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

Table 4—Continued

Place	Date	Time	Length of path, miles	Width of path, yards	Number of persons		Estimated damage		Character of storm	Remarks
					Killed	Injured	Property (exclusive of crops)	Crops		
Kansas, northeastern portion	24	Early morning			0	0	$10,000		Tornado (suspected), wind, hail, electrical, and rain	Scattered damage, mostly of minor nature, reported from many sections beginning about midnight. Damage west of Horton, Brown County, occurring about midnight thought caused by tornado. Scattered hail in Marshall and Brown Counties. At least 2 barns and 1 house burned after lightning strikes.
Gage County (northeastern portion), Nebr.	24	Before dawn	8	*6			Light	$50,000	Hail	Stones size of marbles.
Pawnee City to 4 miles west, Nebr.	24	4-6 a.m.	5-6	*3				$20,000	Hail	Stones 1/2 inch in diameter.
Dodge County (northwestern portion), Nebr.	24	6:30-7 a.m.	15	*8				5,000	Hail	Stones 1/2 to 3/4 inch in diameter.
Connecticut, Massachusetts, and southern Vermont	24	Afternoon				3	3,000	400	Electrical, rain, and hail	Hail size of ping-pong balls at Lenox, Mass.
Pike County, Ind.	24	Afternoon					15,000		Wind	Several trees and 2 or 3 barns blown over.
Humboldt (near), Nebr.	24	Late afternoon	5	*1 1/4			Light	25,000	Hail	Stones 1/4 to 1/2 inch in diameter.
Huntsville area, Randolph County, Mo.	24	9 p.m.	15				19,000	45,000	Wind, rain, and hail	Barn flattened; another barn, church, and automobiles damaged; trees uprooted. Storm moved south-southeastward.
Kentucky, western portion	24	P.m.					10,000	50,000	Wind, rain, hail, and electrical	Damage extensive to tobacco and corn. Greatest damage to crops by hail. Trees and TV antennas toppled, several barns unroofed, streets and roads flooded, windows smashed, and utility and communications services disrupted.
Harmony community, Floyd County, Tex.	24	P.m.							Hail, rain, and electrical	Hail, size of marbles, damaged cotton as much as 50 percent, but area not widespread.
Pikes Peak, Colo.	24						Moderate		Rain and hail	Heavy rains and hail on north slope of Pikes Peak damaged highway and temporarly halted traffic.
	24									Minor storms also reported at Oatsville, Ind.; Missouri Valley, Iowa; in Russell County, Ky.; near Montgomery City and at Independence, Mo.; and near Canyon Ferry Dam, Mont.
Kansas, eastern portion	25	Early a.m.					10,000		Electrical	Lightning strikes caused numerous minor fires throughout eastern Kansas, and destroyed 1 storage building and contents of Sunflower Ordnance Works near De Soto. Damage from latter fire not estimated.
Fort Pierce (5 miles west of), Fla.	25	3 p.m.			0	0		0	Tornado (suspected) and thunderstorm	Trees and TV antennas broken, and lawn furniture scattered in path along highway.
Perquimans County, N.C.	25	3:45 p.m.			0	2	10,000		Tornado (possible)	2-story farm home near Hertford overturned and demolished. 2 women inside only superficially hurt.
Chugwater and Wheatland areas, Wyo.	25	5-7 p.m.	50				75,000	220,000	Rain, wind, hail, and electrical	About 13 1/2 miles from Chugwater, where road blocked, there was probably 4 to 7 inches of rain in 2 hours. Flood damage to C & S tracks severe; about 1,500 feet of track directly upstream from Chugwater washed badly. Damage to county roads, crops, and fences considerable. Considerable hail with storm. Damage in Wheatland area, consisting of hail damage to crops, estimated at $200,000. Storm moved northeastward.
Knox County, Tenn.	25	5:15 p.m.	5	1,000			10,000	Slight	Thunderstorm	Severe thunderstorm struck Bearden community. Many advertising signs destroyed, several trees blown down, and several roofs damaged.
	25									Minor storms also reported at Kenwood Beach, Md.; near Kidder, Mo.; in Wayne County, N.C.; and in Kershaw and Chesterfield Counties, S.C.
Johnson and Sheridan Counties, Wyo.	25-27						70,000	5,000	Rain, hail, wind, and electrical	Major damage from torrential rains in Rock Creek Valley north of Buffalo, and on Prairie Dog Creek south and east of Sheridan. Hail 6 inches deep in some places.
Moccasin and Brooks areas Fergus County, Mont.	26	1:15 p.m.	6	*2				50,000	Rain, hail, and electrical	Storm moved southeastward.

See footnotes at end of table.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

Table 4—Continued June 1955

Place	Date	Time	Length of path, miles	Width of path, yards	Number of persons		Estimated damage		Character of storm	Remarks
					Killed	Injured	Property (exclusive of crops)	Crops		
Conrad (north of), Pondera County, Mont.	26	2 p.m.	30	*2-4				$50,000	Hail, wind, rain, and electrical	Storm moved eastward.
From Spokane eastward, Wash.	26	Afternoon				1			Electrical, hail, and rain	1 person injured by lightning in Spokane. Large number of electrical power failures in Spokane. Hail damage light. Storm moved northeastward.
Duval County, Fla.	26	3-6 p.m.							Wind, rain, and electrical	Wind up to 58 m.p.h., in gusts at Naval Air Station. Some damage to wire lines by wind and lightning. A few trees broken by wind. Storm moved south-southeastward.
Walters Ferry Bridge (near), Owyhee County, Idaho	26	4-5 p.m.						15,000	Rain	Much of damage from erosion, with sand and silt filling irrigation ditches and entering several homes. 25 to 30 tons of hay damaged, plus several crops of clover and corn.
Willard (near), Fallon County, Mont.	26	5 p.m.	5	*1				10,000	Hail, wind, rain, and electrical	Storm moved northeastward.
Meridian, Lauderdale County, Miss.	26	5-6 p.m.					$8,000	2,000	Wind, rain, and electrical	Storm moved eastward.
Baker, Fallon County, Mont.	26	6:15 p.m.	20	*8			Heavy		Rain	Storm moved northwestward. Telephone services interrupted when cable washed out. About 10 families evacuated from city homes, more from rural areas. Rain measured 4.92 inches in city.
Bennett area, Colo.	26	6:45-10:15 p.m.	10-12	*15-20			Heavy	Light	Rain, hail and electrical	Torrential downpour, water accumulated to depth of 18 inches. Greatest damage to roads and bridges. Hail losses light. Storm moved northeastward.
Morrill, Nebr.	26	11 p.m.		Narrow	0	0	15,000	0	Tornado	Damage very freakish. Window blown from house and laid unbroken on nearby lawn.
Weld County, Colo.	26	P.m.	25	*20	0	0	Heavy	Heavy	Rain, hail, tornado (suspected), wind, and electrical	Heavy rains of 3 to 6 inches, hail with stones ranging to 3 inches in diameter, and several twisters in Briggsdale-Cornish-Osgood area severely damaged crops, washed out roads and bridges, killed small livestock, and destroyed several farm buildings. Losses probably exceeded $100,000.
Action (north of), Yellowstone County, Mont.	26		8-10	1,200-1,500				10,000	Hail, rain, and electrical	
Floydada (12 miles east of), Floyd County, Tex.	26								Hail, rain, and electrical	Hail, some as large as hens' eggs, wiped out all crops over limited area in narrow strip.
	26									Minor storms also reported at Selma, Bessemer, Natchez, in Montgomery area, at Opelika, and near Lincoln, Ala.; in Dooley County, Ga.; at University and Oxford, Miss.; at Cyclone and near Joplin, Mo.; and at Harlowton, Mont.
Sumter County, Ga.	26-27	10:35 p.m.-1:25 a.m.					10,000	500	Electrical	Considerable damage at scattered points in Sumter County. Lightning struck home at 10:35 p.m., causing this and 3 other homes to be destroyed by fire. In extreme southern part of County, 4 miles southwest of Leslie, lightning struck small home which was destroyed by fire ignited by lightning, and nearby crib of hay also destroyed by fire. Worst point of lightning damage was 2 miles south of Americus, where large barn struck by lightning and burned, resulting in death of 5 mules and destruction of considerable farm equipment and feedstuff.
North Platte Valley, Wyo. and Nebr.	26-27		50		0	0	400,000	1,000,000	Tornadoes, rain, wind hail, and electrical	Tornado 7 miles southwest of Torrington at 7 p.m., on 26th; 2 homes and farm buildings damaged. Also on 26th, tornado 4 miles west of Whalen with no damage reported. Flood from Cottonwood Canyon destroyed portion of bridge 5 miles west of Fort Laramie. Highway traffic rerouted for 3 days. 150 feet of railroad embankment destroyed and flood washed out Interstate Canal. Temporary repairs to canal will be about $85,000. Damages to county and other bridges in Platte and Goshen Counties estimated at $35,000. Fort Laramie inundated to depths of 5 feet by overflow from Interstate Canal. Runoff from hills north of Torrington 2 to 3 feet deep in town at height of storm on 26th; many basements flooded. Storm runoff and hail caused considerable damage to crops in upper Cherry Creek Basin, south of Lingle. Hail, wind, and flooding caused widespread damage in and around Veteran, Lingle, Fort Laramie, and Torrington to all crops. Storm moved eastward.

See footnotes at end of table.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

Table 4—Continued

Place	Date	Time	Length of path, miles	Width of path, yards	Number of persons		Estimated damage		Character of storm	Remarks
					Killed	Injured	Property (exclusive of crops)	Crops		
Gage County (northeastern portion), Nebr.	27	10 a.m.	7	*1			$ 500	$50,000	Hail	Stones 1 inch in diameter.
Chugwater (14 miles northwest of), Wyo.	27	1 p.m.			0	3	5,000		Tornado and wind	Tornado moving northeastward demolished 1 set of farm buildings. Tornado apparently touched ground only in small area.
Faulkner and White Counties, Ark.	27	Afternoon				1	1,400		Electrical and rain	1 person near Conway knocked unconscious and 14 head of cattle killed by lightning near Cabot.
Morrill (west of), Nebr.	27	Afternoon		Narrow	0	0	Several thousands	Little	Tornado	1 set of farm buildings destroyed and other sets damaged. Storm moved southward into sparsely settled country.
Panhandle (near), Carson County, Tex.	27	4 p.m.			1				Electrical and rain	Lightning struck man while he was operating tractor in field. Storm moved southeastward.
Goins community, McClain County, Okla.	27	4 p.m.	3	*2			2,000	10,000	Hail, wind, rain, and electrical	Some hailstones as large as golf balls. Storm moved southwestward.
Hydro, Caddo County, Okla.	27	4-5 p.m.	15	200	0	0	10,000	1,000	Tornadoes, electrical, wind, rain, and hail	4 separate funnel clouds observed by residents of Hydro. Several farm buildings demolished. Lightning damaged utility lines. Storm moved southwestward.
Gage (near), Ellis County, Okla.	27	4-5 p.m.			0	0	0	0	Tornado (suspected), wind, and rain	Funnel aloft observed moving northeastward.
Colorado, northeastern portion	27	4-8 p.m.	45	*20	0	0	5,000	50,000	Tornadoes (suspected), wind, rain and hail	Storm extended from Greeley area to near Colorado-Nebraska line. Hailstones ranged to size of hens' eggs and caused most of crop damage. Several twisters within area damaged trees and farm buildings. Storm moved northeastward.
Mitchell and Scottsbluff (south of), Nebr.	27	4:30 p.m.	20	Narrow	2	20	450,000	Light	Tornado and hail	A few stones up to size of baseballs. Storm moved southeastward into sparsely settled country.
Lodge Grass (6 miles south of), Big Horn County, Mont.	27	5 p.m.	10	*1				25,000	Hail, wind, rain, and electrical	Storm moved northeastward.
Germantown, Columbia County, N.Y.	27	5:30 p.m.	5	*2				100,000	Hail, electrical, wind, and rain	Hailstones ranging from 1/8 to 1/2 inch in diameter caused damage, principally to cherries, estimated at $100,000. Injury to other crops and property negligible.
Geary, Blaine County, Okla.	27	8-9 p.m.	15	*5			1,500	8,000	Hail, wind, rain, and electrical	Some hailstones measured 8 inches in circumference. Storm moved southeastward.
Canadian, Hemphill County, Tex.	27	8 p.m.			1				Electrical and rain	Lightning struck woman. Thunderstorm with very heavy rain (7 inches in 4 hours). Storm moved southwestward.
Spearsville (7 miles northwest of), Union Parish, La.	27				0	0	0	0	Tornado	Tornado touched ground briefly, then lifted without damage.
	27									Minor storms also reported at Arkadelphia and Gurdon, Ark.; in Connecticut and Massachusetts; at Tampa, Kans.; near Slidell, La.; near Webb City, Mo.; near Lindsay, Mont.; and near Glenvil, Nebr.
Titusville, Fla.	28	1-2 p.m.					250,000		Electrical and rain	Citrus packing plant destroyed by fire believed set by lightning.
Connecticut, Rhode Island, and Massachusetts	28	2-4 p.m.			1	2	Slight	Moderate	Hail, rain, and electrical	8 acres of young corn stripped by hail near Columbia, Conn. Tobacco and corn received slight damage near Springfield, Mass.
Woodland, Yolo County, Calif.	28	4:30 p.m.		15	0	0	1,000		Whirlwind	Severe local whirlwind on cloudless, windless day. Damage to barns and sheds on 1 farm; 1 cow injured. Storm moved northeastward.
Littlefield (near), Hockley County, Tex.	28	5 p.m.	13	*3					Hail and rain	Hail, size of marbles, damaged about 2,500 acres of young cotton and feed. Storm moved northeastward.

See footnotes at end of table.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

Table 4—Continued

Place	Date	Time	Length of path, miles	Width of path, yards	Number of persons		Estimated damage		Character of storm	Remarks
					Killed	Injured	Property (exclusive of crops)	Crops		
Aberdeen (west of), Brown County, S. Dak.	28	5:25 p.m.			0	0	$ 0	$ 0	Tornado	2 small funnel formations first seen west of Aberdeen, moving north-northeastward. These rapidly combined into 1 funnel cloud, but did not reach ground. Funnel cloud remained intact for only several minutes.
Kansas	28	Afternoon and evening			1	3			Electrical and rain	Man killed and boy injured at Wichita when struck by tree felled by lightning. Man on tractor injured by lightning near Sharon Springs. Man injured by lightning bolt at Plainville.
Ferney, Brown County, S. Dak.	28	6:30 p.m.	3 1/2	50	0	0	50,000		Tornado and wind	Funnel formed 3/4 mile west of Ferney, circled across west part of town, then continued eastward for 2 1/2 miles. Damage confined to 1 farm and west part of Ferney which included minor damage to 2 barns, silo, 2 homes, 1 elevator, 6 buildings, many small sheds, trees, etc. Storm moved eastward.
Northern Stevens and southern Grant Counties, Minn.	28	8 p.m.	20	*5			Slight	100,000	Hail, rain, and electrical	Hailstones size of golf balls stripped and downed fields of corn, soybeans, wheat, and barley. Many fields total loss, others 40 to 60 percent loss. Property damage light, mostly broken windows in homes. Storm moved east-northeastward.
Anton (near), Hockley County, Tex.	28	9 p.m.			0	0			Tornado	Hockley County Sheriff and members of Highway Patrol quoted as seeing small tornado in clouds. Funnel did not touch ground and soon dissipated.
Johnson City (near) to Appleton City (south of), St. Clair County, Mo.	28	Evening				1	Slight	Considerable	Hail	Man struck by lightning, but not seriously injured. Grain damaged.
Christina (near), Fergus County, Mont.	28	Evening			1				Electrical	Newspaper accounts indicate death by lightning.
Arco, Lincoln County, Minn.	28				1				Electrical	Woman burned to death in trailer house, set afire by lightning.
	28									Minor storms also reported at Homestead, Fla.; at Ames, Iowa; at Joplin and near Chula, Mo.; and at Butte, Mont.
Perkins to Marshall Counties, S. Dak.	28-29	Night							Hail, wind, rain, and electrical	Hail claim reports show Brown, Day, and Marshall Counties with over 500 claims receiving most damage. Hailstones at Cresbard, Faulk County, reached 5 inches in diameter. Considerable damage to small grains and corn in tri-county area.
Reactor Testing Station (near), Idaho	29	1:42 p.m.			0	0	0	0	Tornado	Funnel cloud observed extending halfway from cloud to ground about 4 miles west of Reactor Testing Station. Disintergrated in about 3 minutes.
Brockton (11 miles north of), Roosevelt County, Mont.	29	3:30 p.m.	60	*3				90,000	Hail, wind, rain, and electrical	Damage $80,000 by hail; $10,000 by wind. Storm moved southeastward.
Illinois, west-central portion	29	Afternoon						75,000	Hail	Hail accompanying local thunderstorms caused crop damage in Pike, Scott, Morgan, Cass, and Menard Counties.
Sidney (near), Richland County, Mont.	29	5:10 p.m.			0	0	0	0	Tornado	Funnel cloud did not reach ground; moved eastward.
Miami (90 miles southeast of), Fla.	29	6:47 p.m.			0	0	0	0	Waterspout	Reported by aircraft pilot as 10 miles south of South Riding Rock.
Buford (near), Williams County, N. Dak.	29	8:15 p.m.			0	0	0	0	Tornado	Funnel cloud touched ground briefly.
	29									Minor storms also reported at St. Petersburg, Fla.; at Centerville, Iowa; at Atchison, Kans.; at Monroe City, Mo.; and near Oswego, Mont.
Plant City and Clearwater areas, Fla.	30	3-5 p.m.							Electrical and rain	Guest house at lake near Plant City destroyed and appliances in home in Plant City damaged as result of lightning strikes. Building in Clearwater struck by lightning and damaged slightly.
Manvel, Grand Forks County, N. Dak.	30	3:30 p.m.	4	75	0	0	5,000	3,000	Tornado (suspected) and rain	Tornado moved northeastward.
East Grand Forks, Polk County, Minn.	30	3:50 p.m.			0	8	10,000		Tornado	Farm home demolished, but barn and machine shed nearby virtually untouched. Trees uprooted. Family of 8 persons injured, 1 seriously. Funnel-shaped cloud observed. Storm moved southeastward.

See footnotes at end of table.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

Table 4—Continued

Place	Date	Time	Length of path, miles	Width of path, yards	Number of persons: Killed	Number of persons: Injured	Estimated damage: Property (exclusive of crops)	Estimated damage: Crops	Character of storm	Remarks
Fargo (south of), Cass County, N.Dak.	30	4 p.m.			0	0		$2,000	Tornado	Damage confined to field crops in small areas.
Wilken and Clay Counties, Minn.	30	4:15 p.m.			0	0	$ 0	Slight	Tornado and wind	Funnel-shaped cloud observed near Wolverton, Wilkin County, moving northeastward to near Baker, Clay County. Funnel cloud dipped to earth several times. Some damage to growing crops on several farms; no farm buildings struck.
Dunlap (1 1/2 miles southwest of), Elkhart County, Ind.	30	4:15 p.m.			0	0	1,500	0	Tornado (suspected) or wind	Half of dwelling roof taken off, barn doors wrenched from hinges, and trees blown over.
Kansas, central portion	30	Evening	*		1	1	5,000	250,000	Tornadoes, wind, electrical, hail, and rain	Severe thunderstorms from Hodgeman County northeastward to Republic and Marshall Counties attended by locally heavy hail, torrential rain, damaging winds, and tornadoes. Heaviest rain and most damaging hail in western Ellsworth, Barton, and Rush Counties. Rainfall north of Albert, Barton County, unofficially estimated at 10 inches and 3-to 6-inch amounts fell at a number of other places in 3-hour period. Newly-planted fields washed out, roads flooded, and several bridges made impassable. Major damages reported are: (1) Several farm buildings northeast of Blue Rapids, Marshall County, damaged by wind between 3 and 4 p.m. (2) Man killed and another injured by lightning at Republic, Republic County, at 5 p.m. (3) Tornado cloud sighted north of Russell and at 5:28 p.m., appeared to be breaking up 14 miles north of Russell, Russell County. (4) Tornado reported sighted touching ground 12 miles south-southwest of Jetmore, Hodgeman County, at 6:45 p.m. Little if any movement. (5) Windstorm damaged hanger and 2 aircraft at Beloit Airport, Mitchell County, during evening. Minor damage in city. (6) Tornado touched down 1 1/2 miles south of Concordia, Cloud County, at 6:40 p.m., moved along ground toward east-northeast for 1 mile then lifted doing minor damage to small buildings and trees. 2 funnels next seen southwest of Clyde, Cloud County, and some damage resulted. At 7:15 p.m., funnel seen from Clifton, Washington County, and several small buildings badly damaged 1 1/2 miles west of that town. (7) About 10 sections of wheatland northwest of Hargrave, Rush County, severely damaged during evening by hail. Loss estimated at $50,000. (8) Hail between 9:15 and 9:45 p.m., in strip 20 miles long and 3 miles wide from Great Bend, Barton County, northwestward caused an estimated $200,000 crop loss. Hailstones ranged up to golf-ball size.
Thayer County (southern half), Nebr.	30	Afternoon					Little	15,000	Hail	Stones small, but considerable wheat shattered.
Jefferson County, Nebr.	30	5-10 p.m.			0	0	Light	10,000	Hail and tornado	Considerable wheat shattered. Funnel cloud observed at Fairbury at 6:15 p.m., but did not reach ground.
	30									Minor storms also reported at Tallahassee, Fla.; at Brenner, Clarkfield, and Minneapolis, Minn.; and in eastern Washington.
Douglas, Ariz.	4				0	1	Slight	0	Dust devil	Crossed city causing slight damage and 1 personal injury when man thrown against steel brace.
Florence, Williamson County, Tex.	5	4:18 p.m.	8-10		0	0			Tornado, rain, hail, and electrical	Tornado moving southeastward, then southwestward uprooted trees and damaged roofs and powerlines. Scattered hail damaged crops. Believed to be same storm that left hail and wind damage from Salado, Jarrell, and Georgetown to Rockdale, Texas.

* Miles instead of yards.
** Yards instead of miles.

GENERAL SUMMARY OF RIVER AND FLOOD CONDITIONS

JUNE 1955

Severe flash floods occurred during June on the North Platte River in Wyoming and Nebraska and in the Colorado River Basin at Las Vegas, Nev. Floods reported elsewhere were light. There was no flooding east of the Mississippi River except on the La Crosse River in Wisconsin.

MISSISSIPPI SYSTEM

Upper Mississippi Basin.--The flooding on the La Crosse River at West Salem, Wis., on June 3 was due to heavy local rainfall during the first 2 days of June. The rainfall during the night of the 2d-3d averaged over 2 inches over the Basin. Surface runoff was quite heavy because of the heavy antecedent rains on May 31. The flood damage was not nearly so great as the damage resulting from the heavy downpour of rain lodging grain and hay crops.

Missouri Basin.--Heavy rains during the afternoon and night of the 26th caused flash floods on the North Platte River in southeastern Wyoming and southwestern Nebraska. This was the worst flood on the North Platte River in 25 years. The crest passed Scottsbluff, Nebr., about 10:00 a.m. on the 28th. There was about a 5-foot rise in the river from Wyoming to Scottsbluff, Nebr., with flooding limited mostly to pasture lands along the river. Some cultivated fields were also flooded but they were under water for such a brief period that in most instances it was a benefit to the crop. In Scottsbluff, the city park and zoo were flooded but precautions had been taken and there was no loss. Flooding below Scottsbluff was minor. Only one bridge across the North Platte River was damaged and that was just an approach to the bridge at Minatare, Nebr., where water undercut a support. The bridge over the Cottonwood on US 26 was completely destroyed. Water was reported 4 feet deep in the main street of Fort Laramie, Wyo. Two-thirds of the basements of business houses and homes in Torrington, Wyo., were filled with water.

This flood was caused by heavy precipitation that ranged from 4.37 inches at Torrington, Wyo., to 0.55 inch at Scottsbluff, Nebr. The greatest amount of precipitation was reported within 6 to 8 miles north and south of the Platte River from Guernsey to Morrill, Nebr. Several unofficial amounts of around 6 inches were reported in the area 3 or 4 miles north of Veteran, Wyo. An unofficial amount of 9.5 inches was reported 4 miles east of Whalen Dam, Wyo., which had only 3.25 inches.

Locally heavy thundershowers (4 to 6 inches) in the Platte River Basin below North Platte, Nebr., caused minor flooding on Elm Creek near Elm Creek, Nebr., on the 16th, and on Salt and Wahoo Creeks at Ashland, Nebr., on the 24th and 25th. Damage was mainly agricultural and confined to low-lying areas.

The moderate flooding on the 17th and 18th in the upper Smoky Hill Basin above Cedar Bluff Dam, Kans., was due to torrential rains of 6 inches. The overflow was of about the same magnitude as the 1951 high water. Flash floods were also reported in the headwaters of the Smoky Hill River in Wallace County. Moderate flooding occurred at the same time on the northern tributaries of the Republican River above Cambridge, Nebr. Along the main stem of the Republican, the overflows were minor. The light flooding on the Solomon River at and above Beloit, Kans., was due to rainfall ranging from 1.5 to 3 inches on the 17th and 18th. Flood damages were light.

Arkansas Basin.--Minor flooding occurred on the Cimarron River in the vicinity of Perkins, Okla., between the 18th and 24th. Flood damages were minor.

The South Canadian River reached flood stage in the Canadian, Tex., area on May 1. There was local flooding on Deep Fork Creek at Oklahoma City, Okla., on May 11. The North Canadian River was considerably above flood stage at many places from May 19-23. Wewoka Creek flooded a small area on May 19 and 20. The North Canadian River flooded a large area from Guymon to Fort Supply Dam, Okla., from May 25 to 28. There were several small areas in the Canadian Watershed where flash floods of short duration occurred during May.

During June the North Canadian River at Woodward, Okla., was above flood stage on the 18th, 20th, and 21st. Local flash floods were reported on this stream from the 15th to the 18th. The floods during June were caused by rainfall ranging from 1 to 4 inches over the North Canadian Basin above Woodward, Okla., from the 14th to 19th. The damages were confined mostly to highways, bridges, and field crops.

WEST GULF OF MEXICO DRAINAGE

The light flooding on the Calcasieu River, the Nezpique Bayou, and the Mermentau River between the 21st and 27th was the result of heavy rain on the 20th. Oberlin, La., and Bon Wier, Tex., reported amounts of 10.95 inches. Antecedent conditions were favorable for high runoff with most of the rain occurring during the middle 2 weeks of the month. Damages from the flooding were insignificant.

GULF OF CALIFORNIA DRAINAGE

Colorado River Basin.--A heavy thunderstorm at Las Vegas, Nev., on the 13th resulted in a flash flood that did rather extensive damage in the city. The area in which the storm and flood occurred is a part of the Las Vegas Wash drainage area, which comprises a total of about 2,240 square miles. Las Vegas Wash drains into Lake Mead. A total of 1.87 inches of precipitation, mostly in a period of 30 minutes, was reported by the cooperative observer at Las Vegas. This station is in the residential section of the city. The Weather Bureau Airport Station reported 2.5 to 3 inches in less than an hour. Hailstones, measuring 0.5 inch in diameter, were also reported.

The heaviest rainfall, which occurred west of Las Vegas, flowed through the city flooding most of the streets to depths of ½ to 3 feet. Unofficial damage estimates have ranged up to $3,000,000. Old-timers consider this storm the worst deluge to strike Las Vegas since 1923.

PACIFIC SLOPE DRAINAGE

Columbia Basin.--Runoff from the mountain snow peak in the Columbia Basin this year was considerably retarded because of near-record cold temperatures during the spring. The Kootenai River, which flows across the northwest corner of Montana and northward through extreme northern Idaho, usually passes its crest by the middle of May. This year at that time the river was still at low stage. The crest was not reached until mid-June. The only place that any flooding occurred on the Kootenai this year was in a stretch of the river

that lies between Bonners Ferry, Idaho, and the Canadian Border. The crest at Bonners Ferry was reached on June 16 when a stage of 31.8 feet was observed. A second crest, caused largely by heavy showers and thundershowers, brought the river back to a stage of 31.1 feet on the 28th, only slightly less than the June 16 crest. The period of high water extended from about the 10th to the end of June. As compared with other floods in the Bonners Ferry area during the past few years, losses this year were moderate with about 1,700 acres inundated, either by seepage or direct overflow. Nearly 8,000 acres were lost in flooding last year, while in 1948 more than 30,000 acres were inundated. Minor damage was sustained by 5 dwellings.

Crest stages in the lower Columbia and Willamette Rivers at Portland were almost as high as those in 1952 and 1954. The number of days the rivers were above flood also were not far different from similar occurrences of many preceding years. There were 31 days, during this flood, at Vancouver, Wash., when the Columbia was above flood stage (15 feet) and 21 days at Portland when the Willamette, because of backwater, was above flood stage (18 feet). Except for slight damage in Yakima Basin, there was no damage in the lower Columbia except that caused by bank erosion and flooding of low-lying pasture land.

PUGET SOUND DRAINAGE

A warm period from June 8 to 13 caused a heavy snow melt runoff in the Snohomish, Snoqualmie, Skagit, and Green Rivers. On June 9, extremely high temperatures occurred throughout western Washington with the absolute record of 100° at Seattle being equalled. The Skagit and Green Rivers approached flood stages but only the Snohomish and Snoqualmie exceeded their flood stages by about 1 foot. Only isolated lowland areas were inundated, principally by back waters along the Snohomish, Snoqualmie, and Green Rivers. Some pastureland was flooded, but damage to pastures and crops was negligible.

FLOOD STAGE DATA

Table 5 (All dates in June unless otherwise specified) JUNE 1955

River and station	Flood stage	Above flood stages -dates From-	To-	Crest * Stage	Date
	Ft.			Ft.	
MISSISSIPPI SYSTEM					
Upper Mississippi Basin					
La Crosse: West Salem, Wis.	7	3	3	8.45	3
Missouri River Basin					
Arikaree: Haigler, Nebr.		15	15	9.1	15
North Fork: Benkelman, Nebr.	5	15	15	6.3	15
		19	19	5.8	19
Frenchman's Creek: Culbertson, Nebr.	7	17	18	8.1	17
Stinking Water Creek: Palisade, Nebr.	9.5	17	17	10.1	17
Red Willow: Red Willow, Nebr.	12	17	18	16.0	17
Republican: Cambridge, Nebr.	6	17	18	7.5	17
				7.0	18
Orleans, Nebr.	9	18	18	9.8	18
Guide Rock, Nebr.	10	5	5	10.4	5
Smoky Hill: Elkader, Kans.	8	17	17	9.0	17
Arnold, Kans.	7	17	18	11.55	17
No. Fork Solomon: Lenora, Kans.	10	15	15	10.0	15
Solomon: Beloit, Kans.	20	19	20	22.9	20
Arkansas River Basin					
Cimarron: Perkins, Okla.	11	18	22	13.2	19
		23	24	11	24
Deep Fork Creek: Dewar, Okla.	18	May 21	May 22	20.0	May 21
		May 26	May 31	20.2	May 29
North Canadian: Beaver, Okla.	9	May 16	May 16	9.2	May 16
Woodward, Okla.	10	May 19	May 21	11.6	May 20
		May 28	May 28	10.3	May 28
		18	18	10.8	18
		20	21	12.2	21
Watonga, Okla.	7	May 19	May 19	8.65	May 19
Yukon, Okla.	11	May 20	May 21	11.5	May 21
		May 28	May 28	11.8	May 28
MISSISSIPPI SYSTEM (Cont'd.)					
Arkansas River Basin (Cont'd.)					
North Canadian: Oklahoma City, Okla.	12	May 19	May 20	12.2	May 19
WEST GULF OF MEXICO DRAINAGE					
Nezpique Bayou: Basile, La.	22	May 22	May 26	27.3	May 23
Mermentau: Mermentau, La.	5	May 24	May 26	5.2	May 25
Calcasieu: Kinder, La.	16	May 21	May 24	19.4	May 22
Old Town Bay, La.	4	May 21	May 27	6.9	May 23
PACIFIC SLOPE DRAINAGE					
Columbia River Basin					
Kootenai: Bonners Ferry, Idaho	31	14	16	31.8	15
		26	27	31.1	27
Willamette: Portland, Oreg.	18	12	July 5	19.3	27,28, July 2
Columbia: Vancouver, Oreg.	15	10	July 11	19.5	27,28, July 2
Snoqualmie: Carnation 1 NW, Wash.	51	10	10	51.7	10
Snohomish: Snohomish, Wash.	23	10	11	24.8	11

* Provisional

RADIOSONDE DATA

Average monthly values

Table 20 — JUNE 1955

Standard pressure surface (mb.)	ALBUQUERQUE, N. MEX. (836 MB.)				ANCHORAGE, ALASKA (1007 MB.)				ANNETTE, ALASKA (1014 MB.)				ATLANTA, GA. (980 MB.)				BARROW, ALASKA (1010 MB.)				BETHEL, ALASKA (1009 MB.)				BISMARCK, N. DAK. (954 MB.)			
	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity
SURFACE	30	1,619	24.1	21	30	42	13.1	54	30	37	12.5	74	30	309	21.5	68	30	8	1.0	94	30	4	9.7	74	30	505	17.0	73
1,000--	30	11			30	86	12.1	54	30	149	11.6	70	30	132			30	92	.6	91	30	79			30	98		
950----	30	479			30	509	8.7	59	30	577	8.4	70	30	581	21.4	58	30	513	1.3	80	30	505	5.0	77	30	544		
900----	30	964			30	957	5.2	64	30	1,020	5.3	74	30	1,046	18.3	60	30	940	2.5	73	30	940	1.9	80	30	1,001	15.7	63
850----	30	1,470			30	1,421	1.8	69	30	1,484	2.2	75	30	1,533	14.6	64	30	1,401	.6	66	30	1,399	- .4	76	30	1,484	12.3	66
800----	30	2,000	22.4	20	30	1,907	- 1.4	71	30	1,971	- .6	70	30	2,043	11.3	62	30	1,885	- 2.0	65	30	1,881	- 2.8	76	30	1,990	8.9	66
750----	30	2,558	17.8	21	30	2,422	- 4.4	70	30	2,488	- 3.2	64	30	2,586	8.1	58	30	2,404	- 4.7	63	30	2,392	- 5.7	74	30	2,530	5.5	61
700----	30	3,140	12.8	24	30	2,958	- 7.6	66	30	3,028	- 5.8	59	30	3,146	5.2	47	30	2,935	- 7.7	62	30	2,928	- 8.6	67	30	3,082	2.4	55
650----	30	3,758	7.3	31	30	3,536	-10.9	65	30	3,608	- 9.0	56	30	3,756	2.2	42	30	3,519	-11.3	56	30	3,504	-11.6	63	30	3,681	- 1.2	53
600----	30	4,408	1.6	37	30	4,143	-14.3	62	30	4,221	-12.6	53	30	4,391	- 1.6	39	29	4,119	-15.2	48	30	4,108	-15.0	59	30	4,312	- 5.1	49
550----	30	5,102	- 4.4	42	30	4,798	-17.9	60	30	4,881	-16.5	49	29	5,082	- 5.9		29	4,779	-19.3	45	30	4,763	-18.8	52	29	4,991	- 9.6	43
500----	30	5,844	-10.6	48	30	5,505	-21.8	56	30	5,590	-20.9	46	29	5,819	-10.5		29	5,473	-24.1	40	30	5,465	-23.3	48	29	5,720	-14.6	43
450----	30	6,658	-16.6	43	30	6,274	-26.8	52	30	6,363	-26.1	42	29	6,636	-15.7		29	6,243	-29.6	41	30	6,230	-28.5	46	29	6,516	-20.0	39
400----	30	7,521	-22.7	31	30	7,112	-32.8	51	30	7,203	-31.9	39	29	7,499	-22.2	37	28	7,061	-35.7		30	7,061	-34.5	43	29	7,373	-26.3	39
350----	30	8,485	-29.9		30	8,036	-40.1		30	8,132	-38.6		29	8,467	-29.5		28	7,976	-42.6		30	7,980	-41.5		29	8,324	-33.6	
300----	30	9,565	-38.1		30	9,070	-47.2		30	9,174	-45.2		29	9,548	-37.9		27	8,999	-49.0		30	9,008	-48.1		29	9,387	-41.5	
250----	30	10,795	-47.0		29	10,262	-51.6		30	10,375	-49.9		29	10,778	-47.2		27	10,183	-51.5		30	10,199	-49.7		28	10,598	-49.6	
200----	29	12,249	-55.5		29	11,716	-48.8		30	11,830	-49.6		29	12,223	-56.4		27	11,650	-45.4		30	11,666	-47.1		28	12,038	-54.6	
175----	29	13,093	-58.8		29	12,596	-47.3		30	12,705	-48.8		29	13,064	-59.8		27	12,541	-44.5		30	12,551	-46.1		28	12,892	-54.2	
150----	29	14,055	-61.0		29	13,615	-46.6		30	13,715	-49.6		29	14,020	-62.6		27	13,572	-44.7		29	13,571	-46.5		28	13,880	-54.1	
125----	28	15,186	-63.1		28	14,821	-47.3		30	14,904	-50.7		26	15,134	-64.0		27	14,789	-45.4		29	14,779	-47.0		27	15,040	-56.1	
100----	26	16,554	-64.3		28	16,293	-47.9		30	16,351	-52.2		22	16,496	-64.0		27	16,274	-45.9		29	16,253	-47.5		27	16,452	-57.3	
80----	23	17,920	-62.4		27	17,762	-48.5		30	17,793	-52.7		21	17,868	-61.6		27	17,756	-45.9		29	17,724	-48.0		26	17,865	-57.3	
60----	22	19,716	-58.6		24	19,644	-48.5		29	19,645	-52.7		18	19,652	-59.4		26	19,671	-45.4		28	19,615	-48.3		21	19,686	-56.3	
50----	20	20,868	-56.7		22	20,842	-48.3		26	20,826	-52.4		17	20,796	-58.0		25	20,885	-45.0		28	20,814	-48.2		17	20,839	-55.4	
40----	17	22,285	-54.6		19	22,310	-48.0		23	22,276	-51.1		14	22,224	-55.0		23	22,380	-44.5		27	22,282	-47.7		12	22,268	-53.6	
30----	14	24,146	-51.3		8	24,177	-47.1		10	24,156	-50.3		12	24,078	-50.8		12	24,249	-44.9		22	24,179	-46.8		8	24,123	-51.6	
20----																					13	26,891	-44.5					

Standard pressure surface (mb.)	BOISE, IDAHO (912 MB.)				BROWNSVILLE, TEX. (1012 MB.)				BUFFALO, N. Y. (992 MB.)				BURRWOOD, LA. (1014 MB.)				CARIBOU, ME. (989 MB.)				CHARLESTON, S. C. (1014 MB.)				COLUMBIA, MO. (986 MB.)			
	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity
SURFACE	30	868	21.8	38	30	7	26.2	79	30	182	17.7	79	30	3	24.8	80	30	191	14.6	80	30	13	21.6	85	30	238	19.9	72
1,000--	30	63			30	109	25.5	79	30	112			30	128	25.0	73	30	97			30	130	22.9	75	30	114		
950----	30	518			30	569	22.9	70	30	553	18.1	59	30	579	22.2	66	30	537	14.9	67	30	582	21.2	63	30	560	20.4	61
900----	30	987	22.1	32	30	1,031	21.4	53	30	1,013	14.7	61	30	1,045	19.1	62	30	991	12.3	65	30	1,044	18.3	62	30	1,024	17.2	63
850----	30	1,480	18.4	32	30	1,525	19.5	43	30	1,494	11.0	66	30	1,534	15.9	57	30	1,468	9.7	67	30	1,532	14.9	61	30	1,509	13.8	66
800----	30	1,995	14.0	36	30	2,044	16.9	33	30	1,996	7.3	68	30	2,047	13.4	46	30	1,968	6.3	68	30	2,042	11.3	61	30	2,018	10.8	65
750----	30	2,543	9.6	40	30	2,597	13.6	32	30	2,531	3.9	60	30	2,594	10.4	40	30	2,498	3.1	67	30	2,586	8.2	48	30	2,560	8.2	57
700----	30	3,103	5.0	43	30	3,168	9.9	32	30	3,082	.9	52	30	3,159	7.5	37	30	3,051	- .2	60	30	3,145	5.3	42	30	3,121	5.0	50
650----	30	3,709	.6	45	30	3,787	5.9	34	30	3,679	- 2.2	45	30	3,769	4.1	33	30	3,643	- 3.6	52	30	3,756	2.2	42	30	3,725	1.2	50
600----	30	4,341	- 3.6	48	30	4,430	1.6	35	30	4,306	- 6.0	37	30	4,413	.3	34	30	4,269	- 6.9	47	29	4,389	- 1.3	39	30	4,362	- 2.8	42
550----	30	5,028	- 8.2	46	30	5,126	- 2.6	35	30	4,982	-10.0	35	30	5,102	- 3.7	31	30	4,943	-11.1	44	29	5,084	- 5.1		29	5,051	- 7.1	41
500----	30	5,757	-13.1	39	30	5,875	- 7.4	32	30	5,710	-14.9		30	5,851	- 8.7	31	30	5,668	-16.1	42	29	5,820	- 9.8		29	5,786	-12.2	41
450----	30	6,560	-18.8		29	6,699	-12.5		30	6,506	-20.9		30	6,663	-14.0		30	6,462	-21.8	39	29	6,636	-15.2		29	6,592	-17.8	41
400----	30	7,419	-25.3	35	29	7,577	-18.7		30	7,358	-27.4		30	7,544	-20.1		30	7,308	-28.5	39	29	7,505	-21.3		29	7,455	-24.0	42
350----	30	8,372	-33.1		29	8,559	-25.5		30	8,303	-35.2		30	8,520	-27.0		30	8,250	-35.7		29	8,475	-28.6		29	8,414	-31.7	38
300----	30	9,436	-41.6		29	9,658	-33.9		30	9,359	-43.1		30	9,612	-35.3		30	9,304	-43.5		29	9,560	-36.7		29	9,484	-39.9	
250----	30	10,648	-50.2		29	10,910	-43.6		30	10,564	-51.0		29	10,856	-45.0		30	10,507	-50.9		29	10,797	-46.0		29	10,706	-48.4	
200----	30	12,082	-55.8		28	12,373	-55.4		29	11,995	-55.5		29	12,310	-55.8		30	11,947	-53.5		29	12,246	-56.5		29	12,148	-56.0	
175----	30	12,930	-56.0		27	13,212	-61.6		28	12,845	-56.4		29	13,149	-60.9		30	12,806	-53.1		27	13,083	-60.0		29	12,991	-58.2	
150----	30	13,910	-56.1		23	14,149	-67.8		27	13,825	-56.4		28	14,093	-65.7		30	13,797	-53.5		26	14,039	-63.0		28	13,960	-59.6	
125----	30	15,067	-57.0		19	15,228	-73.1		26	14,981	-57.2		26	15,187	-69.0		29	14,968	-54.9		26	15,157	-64.2		28	15,098	-60.4	
100----	27	16,471	-58.0		13	16,535	-74.0		24	16,382	-57.8		21	16,518	-69.3		29	16,388	-56.1		24	16,513	-64.3		26	16,477	-61.8	
80----	24	17,873	-57.8		11	17,858	-69.0		19	17,786	-58.1		20	17,859	-66.3		28	17,806	-56.4		23	17,884	-62.4		24	17,859	-60.5	
60----	21	19,690	-56.4		9	19,619	-63.1		11	19,610	-57.0		17	19,610	-62.4		27	19,638	-55.0		22	19,667	-59.8		22	19,658	-59.0	
50----	21	20,847	-56.1		9	20,748	-60.1		9	20,763	-55.9		17	20,741	-59.9		23	20,806	-54.1		22	20,809	-58.1		20	20,811	-57.1	
40----	19	22,275	-53.7		7	22,162	-56.7		9	22,188	-54.2		15	22,139	-56.7		19	22,256	-52.5		19	22,218	-55.3		18	22,236	-54.3	
30----	14	24,132	-51.8		5	24,000	-53.5		5	24,060	-51.6		10	23,967	-53.3		11	24,141	-50.3		15	24,066	-52.1		15	24,091	-51.6	
20----													5	26,600	-51.0						7	26,702	-48.8		6	26,755	-47.7	

Standard pressure surface (mb.)	DODGE CITY, KANS. (922 MB.)				EL PASO, TEX. (879 MB.)				ELY, NEV. (808 MB.)				FAIRBANKS, ALASKA (991 MB.)				FT. HUACHUCA, ARIZ. (856 MB.)				GLASGOW, MONT. (938 MB.)				GRAND JUNCTION, COLO. (849 MB.)			
	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity
SURFACE	30	792	20.2	67	30	1,195	28.6	19	30	1,908	17.6	37	30	135	17.3	49	29	1,428	25.9	17	30	648	18.8	51	30	1,474	22.9	24
1,000--	30	85			30	26			30	39			30	56			29	28			30	89			30	23		
950----	30	539			30	494			30	504			30	490	13.8	48	29	499			30	535			30	484		
900----	30	1,005	20.0	60	30	978			30	978			30	945	9.8	53	29	983			30	1,000	16.9	48	30	965		
850----	30	1,496	17.4	59	30	1,487	27.5	19	30	1,468			30	1,415	5.5	59	29	1,488	26.2	18	30	1,484	12.9	53	30	1,467		
800----	30	2,011	14.5	53	30	2,019	23.0	21	30	1,992	19.3	30	30	1,907	1.4	66	29	2,016	21.9	21	30	1,990	9.3	56	30	1,993	20.6	25
750----	30	2,559	11.4	44	30	2,578	18.2	24	30	2,543	14.6	33	30	2,426	- 2.6	71	29	2,575	16.9	25	30	2,528	5.5	59	30	2,548	15.6	27
700----	30	3,126	7.5	42	30	3,161	13.0	28	30	3,119	9.6	36	30	2,966	- 6.2	67	29	3,152	11.7	30	30	3,082	1.6	59	30	3,125	10.3	32
650----	30	3,735	3.0	42	30	3,783	7.5	34	30	3,727	4.3	42	30	3,546	- 9.6	63	29	3,767	6.2	32	30	3,683	- 1.7	51	30	3,739	4.7	41
600----	30	4,375	- 1.8	48	30	4,431	2.1	39	30	4,374	- 1.1	46	29	4,155	-13.3	55	29	4,414	1.1	32	29	4,311	- 5.4	43	30	4,382	- 1.0	47
550----	30	5,062	- 6.7	48	30	5,124	- 3.6	42	30	5,058	- 6.4	45	29	4,813	-17.5	53	29	5,107	- 3.9	30	29	4,986	- 9.9	40	29	5,074	- 6.6	49
500----	30	5,798	-11.6	42	30	5,871	- 9.1	38	29	5,797	-11.9	44	29	5,519	-21.9	53	29	5,853	- 9.1		29	5,716	-14.7		29	5,807	-12.4	49
450----	30	6,607	-17.2	38	30	6,684	-15.2		29	6,604	-17.5	38	29	6,294	-27.2	55	28	6,667	-14.8		29	6,512	-20.4		29	6,611	-18.2	38
400----	30	7,469	-23.6	36	30	7,559	-21.3		29	7,467	-23.9		29	7,124	-33.0	54	28	7,538	-21.4		29	7,367	-26.8		29	7,471	-24.7	36
350----	30	8,430	-30.9		27	8,522	-28.8		29	8,426	-31.6		29	8,049	-39.9		28	8,508	-28.9		29	8,314	-34.4		29	8,429	-32.1	
300----	30	9,505	-38.6		27	9,606	-37.3		29	9,497	-40.0		29	9,083	-47.5		28	9,591	-37.4		29	9,373	-42.1		29	9,498	-40.5	
250----	30	10,732	-47.2		27	10,839	-46.6		29	10,718	-48.5		28	10,275	-53.1		26	10,830	-46.3		28	10,581	-49.9		29	10,715	-49.3	
200----	29	12,174	-56.3		27	12,286	-56.6		29	12,158	-56.3		28	11,724	-48.5		26	12,278	-56.5		27	12,012	-54.6		29	12,151	-56.4	
175----	29	13,015	-58.6		25	13,125	-60.9		29	13,001	-57.7		28	12,606	-46.7		27	13,112	-60.8		27	12,866	-54.1		29	12,995	-58.1	
150----	29	13,977	-60.4		25	14,073	-64.7		29	13,971	-58.6		27	13,628	-46.2		11	14,088	-63.5		27	13,855	-53.7		29	13,963	-58.9	
125----	27	15,104	-61.2		25	15,178	-67.4		28	15,112	-59.7		27	14,836	-46.8						27	15,023	-54.9		27	15,101	-60.1	
100----	25	16,479	-62.4		24	16,514	-68.2		26	16,495	-60.6		26	16,312	-47.9						27	16,442	-56.5		26	16,484	-62.2	
80----	20	17,854	-60.5		22	17,854	-64.8		26	17,882	-60.5		25	17,781	-48.3						27	17,857	-56.3		22	17,879	-61.0	
60----	17	19,654	-58.9		21	19,625	-60.3		24	19,685	-58.3		25	19,674	-47.9						26	19,687	-55.5		22	19,656	-58.3	
50----	14	20,796	-56.7		18	20,783	-58.0		22	20,833	-57.2		25	20,876	-47.5						25	20,849	-54.5		20	20,807	-56.6	
40----	12	22,215	-54.3		17	22,203	-55.5		21	22,251	-54.6		22	22,354	-47.1						23	22,287	-52.8		19	22,228	-54.1	
30----	10	24,078	-51.3		12	24,068	-52.4		13	24,108	-51.9		20	24,267	-46.2						19	24,161	-49.9		16	24,073	-52.0	
20----					7	26,719	-48.7		5	26,753	-49.0										8	26,777	-48.6		6	26,695	-50.3	

These average values for standard pressure surfaces were obtained by radiosondes; dynamic height (geopotential) in units of .98 dynamic meter, temperature in degrees centigrade and relative humidity in percent.

RADIOSONDE DATA

Average monthly values

Table 20—Continued

Standard pressure surface (mb)	GREAT FALLS, MONT. (886 MB.)				GREEN BAY, WIS. (988 MB.)				GREENSBORO, N. C. (984 MB.)				HATTERAS, N. C. (1014 MB.)				HILO, T. H. (1016 MB.)				INTERNAT. FALLS, MINN. (970 MB.)				KOTZEBUE, ALASKA (1009 MB.)			
	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity
SURFACE	30	1,123	16.7	54	30	210	17.1	77	30	273	18.7	78	30	3	22.0	79	30	9	23.7	73	30	360	16.5	74	30	5	5.8	82
1,000--	30	79			30	109			30	129			30	127	21.6	76	30	152	22.0	74	30	98			30	79	6.2	75
950----	30	530			30	553	17.9	65	30	576	20.1	59	30	572	19.2	66	30	596	18.4	80	30	542	17.8	64	30	505	6.6	64
900----	30	997			30	1,011	14.8	66	30	1,040	17.2	61	30	1,034	16.1	65	30	1,058	14.8	85	30	1,000	14.8	66	30	943	4.2	66
850----	30	1,480	14.7	49	30	1,492	11.6	69	30	1,525	13.5	67	30	1,517	12.7	66	30	1,540	12.3	85	30	1,481	11.7	71	30	1,405	1.6	66
800----	30	1,989	11.0	53	30	1,997	8.5	65	30	2,033	9.6	70	30	2,022	9.4	65	30	2,048	11.4	59	30	1,985	8.3	72	30	1,891	- 1.3	67
750----	30	2,529	6.6	60	30	2,532	5.4	61	30	2,571	6.0	66	30	2,563	6.2	60	30	2,595	10.9		29	2,522	5.2	68	30	2,407	- 4.4	64
700----	30	3,087	2.4	62	30	3,089	2.4	54	30	3,129	3.1	50	30	3,119	3.6	48	30	3,160	8.9		29	3,077	2.1	60	30	2,943	- 7.9	63
650----	30	3,687	- 1.6	57	30	3,688	- .9	51	30	3,730	.4	42	30	3,722	.3	43	30	3,778	5.9		29	3,676	- 1.2	55	30	3,524	-11.1	57
600----	30	4,315	- 5.3	53	30	4,339	- 4.7	49	30	4,365	- 2.8	39	30	4,354	- 3.2		30	4,421	2.4		29	4,306	- 4.8	45	30	4,126	-14.7	54
550----	30	5,001	- 9.7	51	30	4,995	- 9.0	42	30	5,051	- 7.2	41	30	5,041	- 7.2		30	5,115	- 2.2		28	4,984	- 9.3	41	30	4,783	-18.8	49
500----	30	5,723	-14.6	46	30	5,729	-15.9	41	30	5,786	-12.1	39	30	5,773	-12.0		30	5,868	- 7.4		28	5,713	-14.2	41	30	5,483	-23.3	46
450----	30	6,523	-20.0	44	30	6,526	-19.4	37	30	6,593	-17.5		30	6,579	-17.6		30	6,690	-13.5	31	28	6,508	-20.0	40	30	6,251	-28.5	44
400----	30	7,377	-26.2	42	30	7,386	-25.9	36	30	7,456	-23.8		30	7,443	-23.7		30	7,565	-19.8	33	27	7,363	-26.5	37	30	7,080	-34.6	43
350----	30	8,327	-33.8	43	30	8,338	-33.3		30	8,417	-30.9		30	8,403	-30.7		30	8,541	-27.6		26	8,312	-33.9	39	30	7,998	-41.5	
300----	30	9,388	-42.1		30	9,401	-41.5		30	9,493	-38.8		29	9,480	-38.7		30	9,630	-36.5		24	9,371	-42.0		30	9,026	-48.8	
250----	29	10,597	-51.3		30	10,613	-50.1		30	10,720	-47.6		29	10,705	-47.6		30	10,866	-46.4		24	10,582	-50.2		30	10,207	-52.6	
200----	29	12,026	-55.6		30	12,049	-55.6		30	12,164	-55.9		29	12,148	-56.3		30	12,310	-57.9		20	12,004	-54.1		30	11,663	-47.0	
175----	29	12,877	-55.1		30	12,899	-55.9		30	13,008	-58.2		29	12,987	-59.8		30	13,141	-63.8		17	12,858	-53.1		30	12,550	-45.6	
150----	29	13,862	-54.3		29	13,883	-56.0		30	13,974	-59.7		29	13,945	-60.9		28	14,073	-69.0		16	13,843	-52.6		30	13,575	-45.5	
125----	28	15,025	-55.9		29	15,039	-57.3		30	15,112	-60.3		29	15,075	-62.0		27	15,154	-71.8		15	15,011	-54.3		30	14,787	-46.0	
100----	27	16,442	-56.8		29	16,444	-58.4		30	16,498	-61.2		28	16,449	-61.9		27	16,473	-70.7		11	16,435	-55.7		30	16,269	-46.4	
80-----	23	17,861	-57.0		26	17,850	-57.9		26	17,880	-60.1		25	17,830	-60.6		22	17,791	-71.3		9	17,855	-56.6		30	17,747	-46.7	
60-----	23	19,685	-56.1		24	19,666	-56.7		25	19,679	-58.2		24	19,624	-58.6		21	19,510	-66.0		8	19,682	-55.9		30	19,651	-46.8	
50-----	20	20,848	-54.7		22	20,824	-55.3		24	20,827	-56.9		23	20,774	-57.2		21	20,624	-62.8		7	20,845	-54.4		30	20,858	-46.6	
40-----	15	22,287	-52.5		22	22,253	-53.4		23	22,249	-54.6		22	22,188	-54.9		19	22,008	-59.3		5	22,278	-53.2		28	22,335	-46.1	
30-----	11	24,158	-50.0		18	24,105	-51.2		18	24,112	-52.0		16	24,029	-52.0		12	23,841	-54.7						20	24,232	-45.3	
20-----	7	26,850	-45.9		5	26,761	-48.5		7	26,760	-48.4																	

Standard pressure surface (mb)	LAKE CHARLES, LA. (1014 MB.)				LANDER, WYO. (828 MB.)				LAS VEGAS, NEV. (931 MB.)				LITTLE ROCK, ARK. (1004 MB.)				MAZATLAN, MEXICO (1008 MB.)				MCGRATH, ALASKA (996 MB.)				MEDFORD, ORE. (968 MB.)			
	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity
SURFACE	30	5	24.5	78	30	1,696	16.6	49	30	660	31.4	11	30	79	22.5	75	30	14	27.6	73	30	103	14.0	55	30	401	22.3	40
1,000--	30	123	25.2	71	30	55			30	16			30	115			30	85	26.8	74	30	73			30	116		
950----	30	575	22.9	68	30	502			30	484			30	568	21.9	61	30	546	23.9	69	30	503	10.1	59	30	567	21.0	41
900----	30	1,043	19.7	67	30	973			30	966	30.0		30	1,030	18.5	64	30	1,011	23.6	59	30	949	6.2	65	30	1,028	17.1	47
850----	30	1,533	16.6	61	30	1,472			30	1,471	25.3		30	1,518	15.3	63	30	1,509	21.1	64	30	1,414	2.3	71	30	1,512	13.0	55
800----	30	2,048	14.1	49	30	1,991	15.5	40	30	1,997	20.4	20	30	2,030	12.4	59	30	2,033	18.1	65	30	1,901	- 1.2	73	30	2,018	9.2	62
750----	30	2,592	11.4	39	30	2,537	11.2	44	30	2,551	15.1	24	30	2,577	9.5	52	30	2,589	14.9	59	30	2,415	- 4.3	71	30	2,559	6.1	58
700----	30	3,164	8.2	34	30	3,105	6.6	48	30	3,127	9.7	30	30	3,139	6.2	51	30	3,164	11.4	57	30	2,953	- 7.6	72	30	3,113	3.2	47
650----	30	3,776	4.2	38	30	3,709	1.8	53	30	3,737	4.2	36	30	3,747	2.4	52	30	3,783	7.0	60	30	3,531	-10.8	68	30	3,717	- .5	46
600----	30	4,418	.2	38	30	4,348	- 3.3	59	30	4,381	- .4	31	30	4,385	- 1.6	49	30	4,433	2.3	62	30	4,137	-14.2	65	30	4,346	- 4.2	40
550----	30	5,108	- 3.9	33	30	5,024	- 8.4	57	30	5,072	- 4.8		30	5,075	- 5.8	42	30	5,130	- 2.6	61	30	4,796	-18.2	61	30	5,030	- 8.5	38
500----	30	5,856	- 8.5	32	30	5,762	-13.5	50	30	5,813	-10.3		30	5,813	-10.8	42	30	5,705	-12.4	53	30	5,498	-22.7	59	30	5,759	-13.4	42
450----	30	6,675	-13.6	31	30	6,559	-19.3	46	30	6,623	-16.5		30	6,626	-16.3	42	28	6,705	-12.4	56	30	6,269	-27.7	57	30	6,563	-18.8	39
400----	30	7,553	-19.5	32	30	7,420	-25.8	40	30	7,489	-23.7		30	7,492	-22.3	33	28	7,584	-18.2	48	30	7,100	-33.4	56	30	7,420	-24.7	35
350----	29	8,529	-26.7		30	8,372	-33.2	38	30	8,449	-31.3		28	8,457	-29.9		27	8,586	-25.1		30	8,024	-40.5		30	8,376	-32.2	33
300----	29	9,623	-34.7		29	9,435	-41.4		30	9,520	-39.6		28	9,536	-38.0		26	9,666	-33.4		30	9,056	-47.6		30	9,445	-40.7	
250----	29	10,870	-44.0		29	10,646	-50.3		30	10,741	-48.3		28	10,765	-47.3		23	10,914	-43.4		30	10,243	-52.4		30	10,658	-50.2	
200----	28	12,331	-54.9		28	12,069	-57.3		30	12,182	-56.5		28	12,211	-56.1		23	12,377	-54.9		30	11,697	-47.8		29	12,090	-57.6	
175----	27	13,173	-60.2		28	12,913	-56.9		30	13,022	-59.3		28	13,052	-59.3		21	13,216	-61.1		30	12,580	-46.7		29	12,931	-57.6	
150----	27	14,122	-65.0		27	13,889	-56.8		30	13,982	-60.7		25	14,004	-61.6		20	14,158	-67.3		30	13,602	-46.3		29	13,903	-57.8	
125----	24	15,224	-67.5		27	15,040	-57.9		30	15,111	-62.1		25	15,127	-63.7		14	15,242	-73.2		30	14,812	-46.8		28	15,053	-58.0	
100----	21	16,562	-68.1		27	16,437	-60.0		29	16,485	-63.4		23	16,493	-64.5						29	16,287	-47.4		28	16,456	-58.9	
80-----	20	17,911	-65.6		23	17,841	-59.1		26	17,852	-62.1		21	17,860	-61.9						29	17,759	-47.7		27	17,855	-58.4	
60-----	19	19,673	-61.3		19	19,647	-57.2		25	19,644	-59.1		17	19,649	-59.2						29	19,656	-47.6		27	19,669	-57.0	
50-----	19	20,811	-58.9		18	20,806	-55.7		25	20,790	-57.4		15	20,797	-57.0						28	20,857	-47.2		26	20,826	-56.1	
40-----	18	22,221	-56.2		17	22,233	-53.5		25	22,207	-54.6		14	22,227	-54.6						28	22,334	-46.4		23	22,251	-54.4	
30-----	16	24,059	-53.4		11	24,092	-51.2		23	24,069	-51.4		7	24,044	-51.8						25	24,248	-45.5		18	24,103	-52.0	
20-----	10	26,707	-48.9						6	26,751	-47.2										8	26,914	-44.1					
15-----	8	28,617	-46.6																									

Standard pressure surface (mb)	MERIDA, MEXICO (1010 MB.)				MIAMI, FLA. (1015 MB.)				MIDLAND, TEX. (913 MB.)				NANTUCKET, MASS. (1012 MB.)				NASHVILLE, TENN. (994 MB.)				NOME, ALASKA (1009 MB.)				NORTH PLATTE, NEBR. (915 MB.)			
	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity
SURFACE	30	27	27.1	78	30	4	25.3	83	30	871	26.2	42	30	14	13.8	93	30	177	20.7	75	30	7	6.6	82	30	848	17.8	71
1,000--	30	119	26.6	77	30	137	25.3	76	30	54			30	111	15.5	85	30	127			30	82	5.7	80	30	81		
950----	30	579	24.7	73	30	585	22.6	74	30	516			30	554	15.3	73	30	574	20.3	59	30	506	5.0	73	30	532		
900----	30	1,046	22.5	70	30	1,057	19.6	72	30	997	26.2	39	30	1,005	13.2	71	30	1,037	16.9	61	30	941	2.6	71	30	993	18.5	63
850----	30	1,542	19.5	73	30	1,547	16.7	68	30	1,498	22.9	40	30	1,484	10.4	68	30	1,521	13.5	59	30	1,401	.0	72	30	1,481	15.7	62
800----	30	2,061	16.0	72	30	2,061	13.9	62	30	2,023	19.6	39	30	1,986	7.2	67	30	2,029	10.4	58	30	1,884	- 2.7	69	30	1,994	13.0	60
750----	30	2,610	12.8	68	30	2,602	11.1	56	30	2,582	15.5	42	30	2,521	4.4	64	30	2,570	7.4	49	30	2,397	- 5.5	67	30	2,538	9.4	60
700----	30	3,184	9.4	62	30	3,176	7.7	55	30	3,156	11.0	46	30	3,073	1.3	60	30	3,129	4.2	43	30	2,930	- 8.6	63	30	3,102	5.6	56
650----	30	3,800	5.8	55	30	3,783	4.3	52	30	3,773	6.1	47	30	3,670	- 2.0	55	30	3,735	1.0	40	30	3,509	-11.9	61	30	3,708	1.4	53
600----	30	4,447	2.3	48	30	4,432	.7	48	30	4,420	1.1	47	30	4,299	- 5.6	50	30	4,367	- 2.6	36	30	4,110	-15.5	59	29	4,341	- 3.2	46
550----	30	5,146	- 1.3	43	30	5,125	- 3.4	44	30	5,112	- 4.1	45	30	4,975	-10.0	44	30	5,053	- 7.0	36	30	4,764	-19.5	54	29	5,023	- 8.0	44
500----	30	5,899	- 5.3	44	29	5,872	- 8.0	42	30	5,858	- 9.2	39	30	5,704	-14.8	40	30	5,788	-12.0		30	5,463	-24.2	50	29	5,756	-13.3	44
450----	30	6,728	-10.3	41	28	6,692	-13.1	44	30	6,675	-14.4		30	6,495	-20.4	39	30	6,593	-17.5		30	6,229	-29.6	49	29	6,561	-18.9	35
400----	30	7,617	-16.3	40	27	7,573	-19.4	46	30	7,548	-20.7		30	7,354	-26.7	39	30	7,457	-23.5		30	7,053	-35.2	48	29	7,416	-25.2	
350----	29	8,608	-23.8		26	8,551	-26.0	49	30	8,521	-28.0		30	8,304	-33.7		30	8,420	-30.3		30	7,970	-41.9		29	8,371	-32.5	
300----	29	9,713	-32.4		26	9,648	-34.5	44	30	9,608	-36.3		30	9,367	-41.3		30	8,998	-38.4		30	8,999	-48.0		29	9,439	-40.5	
250----	29	10,970	-42.5		26	10,894	-44.9		29	10,846	-45.8		30	10,582	-48.9		30	10,727	-47.2		30	10,193	-49.2		29	10,655	-49.0	
200----	28	12,435	-55.0		26	12,346	-56.8		29	12,297	-56.0		30	12,027	-54.4		30	12,176	-55.3		29	11,661	-46.1		28	12,094	-57.3	
175----	28	13,274	-62.0		25	13,178	-62.7		29	13,136	-60.7		30	12,879	-55.4		29	13,027	-58.9		29	12,550	-45.4		28	12,933	-58.7	
150----	25	14,212	-68.8		25	14,115	-68.2		28	14,087	-64.4		30	13,861	-55.3		29	13,991	-60.0		29	12,153	-45.4		28	13,901	-58.2	
125----	23	15,284	-74.7		22	15,192	-71.7		26	15,193	-66.7		30	15,020	-56.9		29	15,123	-62.0		29	14,792	-45.7		27	15,039	-59.7	
100----	15	16,586	-76.3		18	16,497	-72.0		22	16,535	-68.7		29	16,428	-58.0		29	16,501	-62.1		28	16,277	-46.2		27	16,427	-61.3	
80-----	10	17,888	-71.3		17	17,821	-67.7		19	17,884	-65.3		29	17,834	-57.4		24	17,890	-60.5		28	17,758	-46.6		24	17,809	-60.3	
60-----					17	19,569	-63.4		18	19,651	-61.3		29	19,652	-56.8		24	19,690	-58.6		28	19,665	-46.6		22	19,605	-58.7	
50-----					16	20,701	-60.1		18	20,788	-58.7		28	20,811	-55.9		24	20,840	-56.7		28	20,874	-46.4		19	20,756	-57.0	
40-----					15	22,105	-57.1		17	22,196	-55.8		26	22,240	-53.3		23	22,267	-54.3		26	22,352	-46.1		16	22,171	-54.5	
30-----					12	23,934	-52.5		14	24,040	-52.0		20	24,109	-50.7		23	24,122	-51.4		23	24,264	-45.2		13	24,028	-52.2	
20-----									5	26,685	-47.7		7	26,784	-47.3		10	26,762	-48.0		7	26,966	-43.6					
15-----																	7	28,701	-45.1									

These average values for standard pressure surfaces were obtained by radiosondes; dynamic height (geopotential) in units of .98 dynamic meter, temperature in degrees centigrade and relative humidity in percent.

RADIOSONDE DATA

Average monthly values

Table 20—Continued

Standard pressure surface (mb.)	OAKLAND, CALIF. (1015 MB.)				OKLAHOMA CITY, OKLA. (967 MB.)				OMAHA, NEBR. (966 MB.)				PHOENIX, ARIZ. (968 MB.)				PITTSBURGH, PA. (974 MB.)				PORTLAND, ME. (1010 MB.)				RAPID CITY, S. DAK. (904 MB.)			
	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity
SURFACE	30	6	14.9	73	30	391	22.5	71	30	403	19.5	70	30	341	33.0	22	30	353	18.0	67	29	20	14.5	88	30	966	16.2	69
1,000--	30	131	14.1	73	30	101			30	100			30	48			30	125			29	107			30	89		
950----	30	573	14.9	60	30	552	23.6	62	30	548	20.0	62	30	518	33.4		30	567	18.0	64	29	546	15.6	71	30	534		
900----	30	1,023	15.7	44	30	1,020	20.8	60	30	1,009	17.3	61	30	997	29.5		30	1,027	14.7	67	29	1,002	13.3	72	30	1,000		
850----	30	1,507	14.7	36	30	1,513	17.8	60	30	1,495	14.0	64	30	1,501	24.8	18	30	1,508	11.0	69	29	1,480	10.5	73	30	1,485	14.3	63
800----	30	2,017	12.3	33	30	2,029	14.8	57	30	2,004	10.6	68	30	2,027	20.1	19	30	2,011	7.7	69	29	1,983	7.3	74	30	1,994	11.0	68
750----	30	2,564	9.4	33	30	2,578	11.8	47	30	2,548	7.7	60	30	2,582	15.3	22	30	2,547	4.5	64	29	2,513	3.6	72	30	2,532	7.6	68
700----	30	3,124	6.1	27	30	3,146	8.0	42	30	3,106	4.2	55	30	3,157	10.4	24	30	3,099	1.5	59	29	3,067	.3	66	30	3,095	3.8	66
650----	30	3,732	2.4	25	30	3,757	3.6	44	29	3,710	.3	54	30	3,773	5.7	25	30	3,696	- 1.5	47	29	3,660	- 2.7	56	30	3,693	- .1	61
600----	30	4,369	- 1.5	25	30	4,397	- 1.0	44	29	4,342	- 3.8	50	30	4,418	1.1		30	4,326	- 5.1	41	29	4,289	- 6.4	51	30	4,330	- 4.4	54
550----	30	5,058	- 6.2	26	30	5,085	- 5.8	45	29	5,022	- 8.4	44	30	5,113	- 3.8		30	5,006	- 9.4	38	28	4,965	-10.6	47	29	5,007	- 9.1	50
500----	30	5,795	-11.3		30	5,824	-10.9	45	29	5,756	-13.6	39	30	5,856	- 9.2		30	5,734	-14.5		28	5,690	-15.4	44	29	5,740	-14.0	46
450----	30	6,606	-17.2		30	6,637	-16.2	43	29	6,558	-19.4	34	30	6,671	-15.3		30	6,532	-20.2	35	28	6,483	-21.1	40	29	6,534	-19.8	46
400----	30	7,468	-23.7		30	7,502	-22.2	39	28	7,409	-25.6	34	30	7,540	-22.1		30	7,387	-26.4	37	28	7,337	-27.4	42	28	7,392	-25.9	47
350----	30	8,427	-31.8		30	8,468	-29.3	39	27	8,363	-33.0		30	8,507	-29.5		30	8,336	-33.8		27	8,288	-34.7	46	28	8,344	-33.4	45
300----	30	9,497	-40.6		30	9,549	-37.5		27	9,429	-40.8		30	9,587	-37.8		30	9,398	-41.9		26	9,347	-42.8		28	9,407	-41.7		
250----	30	10,712	-50.1		30	10,781	-46.5		26	10,643	-49.1		29	10,819	-46.8		30	10,609	-49.8		26	10,555	-50.4		28	10,618	-50.4		
200----	30	12,141	-58.3		30	12,228	-55.9		25	12,087	-56.1		28	12,274	-56.2		29	12,048	-55.7		25	11,996	-54.7		28	12,048	-56.8		
175----	30	12,977	-59.7		30	13,070	-59.4		24	12,932	-56.8		28	13,114	-60.0		29	12,894	-57.4		25	12,848	-55.6		28	12,893	-57.1		
150----	30	13,939	-60.4		30	14,027	-61.6		24	13,904	-57.8		28	14,068	-63.1		29	13,868	-56.7		25	13,830	-55.0		28	13,868	-57.3		
125----	30	15,075	-60.8		29	15,151	-63.2		22	15,050	-58.7		28	15,182	-65.3		29	15,020	-57.8		23	14,996	-56.8		27	15,019	-57.6		
100----	29	16,459	-62.2		23	16,511	-64.7		22	16,442	-60.8		28	16,537	-65.8		28	16,419	-58.7		19	16,401	-57.7		24	16,419	-59.2		
80-----	28	17,841	-61.0		21	17,881	-61.6		21	17,830	-60.0		28	17,898	-63.4		25	17,815	-58.3		16	17,801	-57.7		21	17,814	-59.1		
60-----	28	19,638	-58.8		20	19,673	-59.0		21	19,634	-57.9		28	19,678	-60.0		22	19,628	-57.1		13	19,618	-57.3		20	19,619	-57.4		
50-----	27	20,783	-57.2		17	20,819	-57.1		21	20,787	-56.0		26	20,826	-57.8		22	20,782	-56.3		11	20,776	-55.6		14	20,768	-56.4		
40-----	26	22,203	-54.8		16	22,242	-54.8		19	22,214	-53.5		19	22,260	-54.2		21	22,204	-54.4		11	22,203	-53.8		11	22,188	-54.2		
30-----	21	24,057	-51.8		14	24,096	-52.1		15	24,090	-51.2		11	24,099	-51.7		18	24,062	-51.8		9	24,059	-51.2		7	24,043	-51.0		
20-----	14	26,721	-48.3		9	26,761	-48.6		6	26,735	-47.3						6	26,707	-47.6									
15-----	7	28,642	-46.4																									

Standard pressure surface (mb.)	ST. CLOUD, MINN. (975 MB.)				SAN ANTONIO, TEX. (985 MB.)				SAN JUAN, P. R. (1015 MB.)				SANTA MARIA, CALIF. (1007 MB.)				S. STE. MARIE, MICH. (988 MB.)				SPOKANE, WASH. (930 MB.)				SWAN ISLAND, W. I. (1012 MB.)			
	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity
SURFACE	30	316	17.7	74	30	243	26.9	60	30	19	24.9	86	30	74	12.7	83	30	221	14.8	78	30	722	20.7	34	30	10	27.3	80
1,000--	30	100			30	105			30	150	25.3	78	30	129	12.2	83	30	119			30	86			30	115	26.5	80
950----	30	547	18.7	65	30	564	24.4	61	30	599	22.3	79	30	570	13.7	71	30	560	17.2	63	30	538			30	567	23.2	81
900----	30	1,005	15.5	67	30	1,033	21.3	68	30	1,070	19.5	77	30	1,019	17.2	41	30	1,017	15.2	61	30	1,001	18.4	36	30	1,037	20.5	74
850----	30	1,487	12.1	69	30	1,527	18.3	70	30	1,561	16.7	71	30	1,506	16.3	33	30	1,499	12.1	64	30	1,487	14.0	42	30	1,530	17.9	67
800----	30	1,993	8.8	69	30	2,045	15.8	61	30	2,076	14.3	62	30	2,019	13.5	31	30	2,000	8.7	60	30	1,994	9.5	48	30	2,047	15.3	57
750----	30	2,531	5.6	63	30	2,594	13.1	44	30	2,622	11.7	53	29	2,570	10.5	31	30	2,538	5.2	60	30	2,530	5.2	52	30	2,596	12.4	48
700----	30	3,086	2.8	52	30	3,168	9.6	40	30	3,194	8.7	45	29	3,131	7.4	26	30	3,099	2.2	58	30	3,085	1.2	54	30	3,167	9.1	47
650----	30	3,686	- .6	50	30	3,780	5.5	42	30	3,805	4.9	47	29	3,746	4.1		30	3,693	- 1.2	48	30	3,686	- 2.3	47	30	3,783	5.6	42
600----	30	4,317	- 4.6	48	29	4,431	1.1	41	30	4,453	1.5	39	29	4,384	.4		30	4,324	- 4.8	47	30	4,309	- 5.7	43	30	4,428	1.7	39
550----	30	4,998	- 9.0	45	29	5,126	- 3.5	43	30	5,149	- 2.1	33	29	5,080	- 4.0		30	5,001	- 9.1	43	30	4,992	- 9.9	44	30	5,125	- 2.3	33
500----	30	5,728	-13.6	38	29	5,874	- 8.3	39	30	5,901	- 6.6	31	29	5,822	- 9.1		29	5,737	-13.7	42	30	5,714	-14.9	45	30	5,875	- 6.6	28
450----	30	6,529	-19.3	34	29	6,691	-13.1		30	6,724	-11.9	31	29	6,638	-14.9		29	6,537	-19.4	40	30	6,511	-20.6	46	30	6,699	-11.3	
400----	30	7,386	-25.7	35	29	7,571	-19.3		30	7,608	-18.0		29	7,507	-22.2		29	7,395	-25.9	39	30	7,363	-26.9	45	30	7,586	-16.9	
350----	30	8,339	-33.1	33	29	8,548	-26.9		30	8,591	-25.4		29	8,473	-30.1		29	8,346	-33.7		30	8,312	-34.2	44	29	8,573	-24.0	
300----	30	9,403	-41.4		29	9,640	-35.3		30	9,689	-34.3		29	9,551	-38.6		29	9,407	-42.3		30	9,371	-42.4		29	9,677	-32.6	
250----	30	10,617	-49.5		29	10,882	-45.3		30	10,937	-44.5		29	10,777	-47.8		28	10,620	-51.1		30	10,579	-51.0		29	10,934	-42.5	
200----	30	12,058	-54.6		29	12,335	-56.1		30	12,392	-56.7		29	12,220	-56.3		27	12,043	-56.1		30	12,008	-55.9		28	12,403	-54.2	
175----	30	12,911	-54.6		29	13,173	-61.5		30	13,225	-63.4		29	13,062	-58.7		25	12,883	-56.0		29	12,857	-54.7		25	13,245	-60.7	
150----	29	13,901	-55.2		28	14,114	-67.0		30	14,157	-70.1		29	14,024	-60.7		22	13,870	-55.1		29	13,843	-53.9		23	14,189	-67.6	
125----	29	15,061	-56.6		28	15,202	-71.2		29	15,225	-75.0		29	15,154	-62.0		19	15,033	-56.9		29	15,009	-55.5		21	15,265	-73.8	
100----	29	16,471	-57.9		23	16,515	-72.1		26	16,516	-75.3		29	16,526	-63.6		18	16,437	-57.4		29	16,428	-56.1		20	16,559	-76.0	
80-----	27	17,879	-58.2		21	17,839	-68.2		25	17,821	-71.7		28	17,899	-61.6		13	17,850	-57.8		27	17,849	-56.4		13	17,857	-71.9	
60-----	26	19,698	-56.1		16	19,586	-63.3		24	19,545	-64.5		23	19,691	-58.9		9	19,657	-56.6		23	19,684	-55.6		11	19,582	-65.1	
50-----	22	20,862	-55.2		16	20,712	-60.9		24	20,668	-60.9		23	20,837	-57.4		8	20,819	-55.0		23	20,847	-54.7		9	20,691	-61.8	
40-----	19	22,296	-53.0		16	22,110	-56.9		22	22,072	-57.8		19	22,259	-54.7		7	22,278	-52.5		20	22,282	-52.3		9	22,085	-57.3	
30-----	15	24,176	-50.4		11	23,940	-53.7		21	23,900	-54.1		14	24,126	-51.4						16	24,145	-49.9		8	23,918	-54.1	
20-----	6	26,871	-46.5						8	26,541	-48.6																	

Standard pressure surface (mb.)	TACUBAYA, MEXICO (773 MB.)				TAMPA, FLA. (1015 MB.)				TATOOSH ISLAND, WASH. (1014 MB.)				WASHINGTON, D. C. (1004 MB.)				YAKUTAT, ALASKA (1014 MB.)			
	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity
SURFACE	14	2,306	18.4		30	7	24.0	77	30	31	10.5	90	30	88	18.7	73	30	12	9.6	79
1,000--	14	38			30	136	24.6	74	30	151	11.1	84	30	124			30	129	8.5	78
950----	14	503			30	589	22.2	70	30	581	10.2	76	30	570	18.3	63	30	550	5.7	79
900----	14	979			30	1,054	19.4	65	30	1,028	9.0	68	30	1,027	14.9	66	30	992	3.2	76
850----	14	1,482			30	1,544	16.6	58	30	1,500	7.3	64	30	1,509	11.4	69	30	1,453	1.0	74
800----	14	2,017			30	2,058	13.5	55	30	1,997	5.2	63	30	2,013	8.0	71	30	1,938	- 1.5	72
750----	14	2,570	16.4		30	2,608	10.8	47	30	2,527	2.5	61	30	2,550	4.8	68	30	2,453	- 4.4	68
700----	14	3,151	12.1		30	3,171	7.7	44	30	3,076	- .6	59	30	3,102	1.6	60	30	2,991	- 7.0	64
650----	14	3,775	7.2		30	3,784	4.2	41	30	3,666	- 3.8	56	30	3,702	- 1.5	52	30	3,571	-10.0	60
600----	14	4,421	2.4		30	4,426	.7		30	4,294	- 7.3	54	30	4,329	- 4.9	42	30	4,178	-13.5	57
550----	13	5,122	- 2.2		30	5,122	- 3.2	36	30	4,966	-11.5	53	30	5,012	- 9.3	37	30	4,839	-17.4	54
500----	12	5,872	- 6.2		30	5,868	- 7.7	34	29	5,691	-16.1	51	30	5,738	-14.2	37	30	5,544	-22.0	53
450----	11	6,700	-10.6		30	6,690	-13.1		29	6,481	-21.3	45	30	6,537	-19.6		30	6,318	-27.4	51
400----	11	7,587	-16.3		30	7,566	-19.4	33	29	7,335	-27.5	41	30	7,393	-25.9		30	7,148	-33.4	46
350----	8	8,575	-23.1		30	8,544	-26.6		28	8,277	-34.8	44	30	8,345	-33.3		30	8,070	-40.9	
300----	6	9,680	-31.9		30	9,638	-34.9		28	9,334	-42.5		30	9,409	-41.3		30	9,103	-47.1	
250----	5	10,952	-42.2		30	10,883	-44.6		27	10,541	-50.4		30	10,623	-49.6		30	10,298	-49.8	
200----	5	12,421	-54.2		30	12,339	-55.8		27	11,978	-54.0		30	12,061	-55.9		30	11,760	-48.3	
175----					30	13,177	-61.3		27	12,836	-53.1		30	12,906	-57.7		30	12,640	-47.4	
150----					29	14,123	-66.5		27	13,828	-53.3		30	13,876	-58.0		30	13,658	-47.4	
125----					28	15,215	-69.5		26	15,001	-53.7		29	15,018	-58.8		30	14,860	-48.7	
100----					26	16,538	-69.8		26	16,430	-54.4		26	16,415	-60.0		30	16,326	-49.2	
80-----					22	17,874	-65.7		26	17,857	-54.5		25	17,807	-59.7		28	17,791	-49.7	
60-----					20	19,628	-62.0		26	19,702	-53.4		22	19,611	-58.1		26	19,667	-50.0	
50-----					19	20,764	-59.7		26	20,876	-52.7		21	20,764	-56.8		25	20,862	-49.4	
40-----					19	22,168	-56.6		25	22,322	-51.2		21	22,184	-54.4		25	22,327	-48.5	
30-----					14	24,006	-53.2		24	24,204	-48.5		18	24,046	-50.7		9	24,210	-48.0	
20-----					6	26,698	-47.6		13	26,892	-44.9		7	26,713	-47.7					

Note: All observations scheduled at 0300 G.C.T. except at Mazatlan, Merida and Veracruz, where they are taken near 0200, G.C.T. "Number of observations" refers to those of dynamic height only. Temperature and humidity data may be missing for one or more pressure surfaces of some observations. The temperature values are based on 15 or more observations at the surface or 5 observations at a standard pressure level. Relative humidity data are not published for standard pressure surfaces having less than 16 actual observations.

These average values for standard pressure surfaces were obtained by radiosondes; dynamic height (geopotential) in units of .98 dynamic meter, temperature in degrees centigrade and relative humidity in percent.

Relative humidity data beginning with October 1, 1948, were computed and expressed in these tables on the basis of vapor-pressure over water. Upper air values of relative humidity at levels with temperatures less than 0°C, have formerly been computed and expressed on the basis of the vapor-pressure over ice. All relative humidity observations are obtained by electric hygrometer and have been adjusted to compensate for the value occurring below the operating range of the humidity element.

RADIOSONDE DATA

Average monthly values

Table 20 *Air Force Data for February 1955

Standard pressure surface (mb.)	DENVER, COLO. (830 MB.)				FT. WORTH, TEX. (998 MB.)				OGDEN, UTAH (855 MB.)				RANTOUL, ILL. (994 MB.)				ROME, N. Y. (1003 MB.)			
	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity
SURFACE	27	1,661	- 4.4	56	28	178	9.9	58	28	1,450	- 4.6	62	28	227	- 1.4	74	28	146	- 5.4	73
1,000--	27	162			28	158			28	197			28	177			28	177		
950----	27	582			28	585	8.9	55	28	610			28	587	- 1.8	73	28	580	- 5.1	74
900----	27	1,019			28	1,030	6.5	54	28	1,041			28	1,016	- 2.2	61	28	1,003	- 6.3	73
850----	27	1,474			28	1,497	4.9	49	28	1,495			28	1,469	- 2.7	51	28	1,449	- 7.4	73
800----	27	1,957	- 2.4	48	28	1,991	3.9	41	28	1,974	- 4.6	54	28	1,949	- 4.4	46	28	1,920	- 8.6	66
750----	27	2,467	- 4.6	45	28	2,519	1.9	33	28	2,480	- 7.9	58	28	2,458	- 6.6	49	28	2,422	-10.5	60
700----	27	3,007	- 9.4	43	28	3,066	- .7		28	3,011	-11.2	59	28	2,992	- 8.7	54	28	2,948	-11.9	54
650----	27	3,580	-12.7	46	28	3,656	- 4.2		28	3,581	-14.3	62	28	3,565	-11.8	52	28	3,518	-14.5	51
600----	27	4,184	-16.7	49	28	4,280	- 8.4		28	4,179	-17.8	62	28	4,172	-15.2	47	28	4,115	-17.8	50
550----	27	4,836	-20.8	51	28	4,951	-13.1		28	4,828	-21.4	61	28	4,825	-19.4	43	28	4,761	-21.7	50
500----	27	5,531	-25.3	50	28	5,668	-18.0		28	5,521	-25.9	61	28	5,526	-23.8	46	28	5,455	-26.3	50
450----	27	6,297	-30.7		28	6,454	-23.4		28	6,279	-30.9	62	28	6,291	-29.1		28	6,210	-31.3	
400----	27	7,114	-36.7		28	7,298	-29.6		28	7,101	-37.0		28	7,121	-34.7		28	7,033	-36.6	
350----	27	8,024	-43.5		28	8,237	-36.2		28	8,009	-44.0		28	8,039	-41.4		28	7,945	-42.7	
300----	26	9,047	-50.0		27	9,287	-44.0		28	9,025	-50.7		28	9,069	-48.5		28	8,969	-48.8	
250----	26	10,224	-54.5		27	10,484	-53.3		28	10,196	-55.4		28	10,248	-55.1		28	10,150	-54.2	
200----	26	11,640	-56.6		27	11,896	-59.1		24	11,632	-58.0		28	11,661	-57.4		26	11,553	-55.6	
175----	26	12,486	-56.4		25	12,740	-58.7		22	12,465	-57.7		28	12,508	-55.8		26	12,405	-54.5	
150----	26	13,464	-56.4		24	13,706	-59.8		21	13,446	-56.3		28	13,487	-56.3		24	13,387	-54.9	
125----	26	14,617	-57.7		20	14,844	-63.0		19	14,594	-57.9		26	14,640	-58.1		24	14,548	-56.6	
100----	24	16,017	-60.0		12	16,180	-66.3		19	15,991	-60.0		25	16,035	-60.8		18	15,955	-58.5	
80-----	21	17,418	-61.5						18	17,377	-61.3		21	17,406	-62.4		13	17,363	-59.2	
60-----	11	19,173	-62.6						10	19,169	-60.8		12	19,163	-62.6		7	19,159	-60.8	
50-----	7	20,286	-63.5						7	20,312	-62.3		12	20,286	-62.9					
40-----													11	21,666	-62.9					
30-----													8	23,447	-60.3					
20-----													6	26,001	-55.8					

* March data for the above Air Force stations will be included in the July issue of this publication.

Note: All observations scheduled at 0300, G.C.T. "Number of observations" refers to those of dynamic height only. Temperature and humidity data may be missing for one or more pressure surfaces of some observations. The temperature values are based on 15 or more observations at the surface or 5 observations at a standard pressure level. Relative humidity data are not published for standard pressure surfaces having less than 10 actual observations.

Relative humidity data beginning with October 1, 1948, were computed and expressed in these tables on the basis of vapor-pressure over water. Upper air values of relative humidity at levels with temperatures less than 0°C. have formerly been computed and expressed on the basis of the vapor-pressure over ice. All relative humidity observations are obtained by electric hygrometer and have been adjusted to compensate for the value occurring below the operating range of the humidity element.

These average values for standard pressure surfaces were obtained by radiosondes; dynamic height (geopotential) in units of .98 dynamic meter, temperature in degrees centigrade and relative humidity in percent.

PILOT BALLOON DATA

Average monthly resultant winds

Table 21 — JUNE 1955

Altitude (meters) m.s.l.	Abilene, Tex. (534 m.)			Albuquerque, N. Mex. (1,627 m.)			Billings, Mont. (1,095 m.)			Bismarck, N.Dak. (505 m.)			Boise, Idaho (868 m.)			Brownsville, Tex. (7 m.)			* Buffalo, N. Y. (182 m.)			Burlington, Vt. (100 m.)			Charleston, S. C. (16 m.)			Cincinnati, Ohio (273 m.)			El Paso, Tex. (1,198 m.)			Ely, Nev. (1,910 m.)		
	No. of observations	Direction	Speed	No. of observations	Direction	Speed	No. of observations	Direction	Speed	No. of observations	Direction	Speed	No. of observations	Direction	Speed	No. of observations	Direction	Speed	No. of observations	Direction	Speed	No. of observations	Direction	Speed	No. of observations	Direction	Speed	No. of observations	Direction	Speed	No. of observations	Direction	Speed	No. of observations	Direction	Speed
Surface	30	155	4.0	30	224	3.0	30	360	1.3	30	337	0.6	29	321	3.8	30	126	7.3	30	241	2.3	28	303	1.6	30	192	2.3	28	236	1.3	30	251	3.6	30	197	2.1
500	--	---	---	--	---	---	--	---	---	--	---	---	--	---	---	30	136	7.0	30	272	3.1	28	290	1.5	30	198	2.0	28	235	1.4	--	---	---	--	---	---
1,000	30	159	5.6	--	---	---	--	---	---	29	314	.3	29	320	3.8	24	147	6.7	30	287	3.6	27	333	2.5	30	239	2.3	27	239	1.1	--	---	---	--	---	---
1,500	30	177	4.5	--	---	---	30	8	1.5	25	201	1.5	29	318	3.5	20	158	4.1	30	286	3.9	26	338	3.4	27	287	3.5	26	256	1.5	30	244	4.0	--	---	---
2,000	28	201	3.9	30	217	4.1	29	21	.8	22	209	2.8	29	293	2.3	17	154	2.8	29	302	2.8	23	325	3.5	23	287	4.6	22	294	1.8	30	250	4.0	30	199	2.3
2,500	26	225	4.0	30	229	3.9	29	279	1.4	17	230	4.5	28	282	2.9	15	154	2.4	29	308	2.9	20	311	4.5	20	293	6.1	19	288	3.8	30	248	4.6	30	213	2.9
3,000	24	241	4.5	30	248	4.5	24	269	3.9	16	244	5.7	28	266	3.5	14	134	2.0	29	334	3.2	18	315	4.2	19	298	7.4	13	319	3.7	30	255	5.4	28	218	3.3
4,000	18	256	5.3	29	275	7.2	15	270	8.2	12	232	6.0	25	262	5.4	12	21	2.1	28	336	3.3	11	300	4.5	15	298	8.3				29	253	6.4	26	234	4.3
5,000	18	272	6.1	28	279	8.7	10	276	10.6	12	228	8.8	24	264	5.6				28	342	4.1	10	303	4.7	12	295	8.4				27	273	7.1	24	249	5.8
6,000	16	290	8.0	27	278	9.7	10	270	11.9				23	265	7.7				28	352	5.5										25	276	8.1	23	249	9.5
8,000	13	272	10.0	23	283	13.3							15	267	9.6				28	338	6.7										24	269	10.5	20	254	12.3
10,000				20	275	16.8													28	332	7.6										23	267	15.1	14	262	12.7
12,000				12	284	19.5													27	316	9.5										20	272	19.2			
14,000																			26	325	6.5										16	277	15.4			
16,000																			24	319	2.9										10	275	8.7			

Altitude (meters) m.s.l.	Grand Junction, Colo. (1,475 m.)			Green Bay, Wis. (210 m.)			Greensboro, N. C. (271 m.)			Havre, Mont. (767 m.)			Jacksonville, Fla. (16 m.)			Little Rock, Ark. (88 m.)			Medford, Ore. (416 m.)			Miami, Fla. (12 m.)			Mobile, Ala. (66 m.)			Nashville, Tenn. (182 m.)			** Oakland, Calif. (8 m.)			Omaha, Nebr. (306 m.)		
	No. of observations	Direction	Speed	No. of observations	Direction	Speed	No. of observations	Direction	Speed	No. of observations	Direction	Speed	No. of observations	Direction	Speed	No. of observations	Direction	Speed	No. of observations	Direction	Speed	No. of observations	Direction	Speed	No. of observations	Direction	Speed	No. of observations	Direction	Speed	No. of observations	Direction	Speed	No. of observations	Direction	Speed
Surface	30	246	2.8	30	195	1.4	30	357	0.3	30	311	0.5	29	102	1.4	29	177	1.0	30	304	2.6	28	139	2.9	30	215	1.4	29	309	1.3	30	269	5.7	30	177	1.1
500	--	---	---	30	202	2.3	30	266	.5	--	---	---	28	165	1.0	29	224	1.2	30	302	3.1	28	162	3.2	29	232	1.6	29	298	1.9	30	277	4.8	30	177	1.2
1,000	--	---	---	28	224	3.3	30	279	1.7	30	273	.9	28	239	1.5	27	227	2.3	30	308	3.6	27	176	2.1	28	272	2.6	27	281	1.8	30	283	3.5	29	182	2.7
1,500	30	247	2.9	25	218	3.8	28	290	2.7	30	242	1.4	24	255	2.8	26	239	2.8	30	312	2.6	26	226	1.9	21	290	3.4	27	285	2.3	30	280	2.6	24	191	3.2
2,000	30	256	3.4	22	223	2.8	27	295	4.0	28	205	1.6	20	263	4.6	16	259	2.8	28	303	.9	25	242	2.4	19	308	3.2	25	279	2.4	30	292	2.7	21	239	3.6
2,500	30	239	3.2	16	275	3.0	23	311	4.5	26	204	1.9	19	261	5.2	14	277	4.2	28	241	.8	23	252	2.4	15	331	2.6	22	295	3.7	30	288	2.7	21	263	5.3
3,000	30	240	4.1	15	271	2.7	19	310	4.8	24	225	2.8	17	279	5.8	14	293	5.3	25	308	.7	22	243	3.2	12	336	3.6	19	301	3.7	30	285	2.2	17	266	6.7
4,000	29	253	5.5	11	330	3.5	16	303	6.6	16	229	2.5	11	276	7.6				23	285	4.1	14	238	4.9				15	305	5.5	30	279	4.0	12	282	8.0
5,000	27	265	7.2	11	346	4.2	11	314	10.3	13	290	5.1							22	277	5.9	13	239	5.6				11	300	7.7	30	278	5.1			
6,000	24	265	10.5	10	349	5.2	10	332	11.6	10	251	7.6							20	279	7.5	10	268	5.5							30	280	6.2			
8,000	20	288	13.9																17	252	10.0										30	273	8.7			
10,000	15	285	16.5																15	258	10.0										30	278	10.7			
12,000																															30	270	11.9			
14,000																															30	253	11.7			
16,000																															29	246	6.5			

Altitude (meters) m.s.l.	Phoenix, Ariz. (345 m.)			Rapid City, S. Dak. (982 m.)			St. Cloud, Minn. (318 m.)			San Antonio, Tex. (240 m.)			San Diego, Calif. (13 m.)			# Sault Ste. Marie, Mich. (221 m.)			Spokane, Wash. (725 m.)			% Washington, D. C. (88 m.)		
	No. of observations	Direction	Speed	No. of observations	Direction	Speed	No. of observations	Direction	Speed	No. of observations	Direction	Speed	No. of observations	Direction	Speed	No. of observations	Direction	Speed	No. of observations	Direction	Speed	No. of observations	Direction	Speed
Surface	30	258	1.9	29	287	0.5	29	212	1.2	30	147	3.4	29	261	3.6	30	267	2.8	30	219	2.1	30	320	1.2
500	30	258	2.7	--	---	---	29	237	1.3	30	147	4.4	26	271	2.8	30	282	3.4	--	---	---	30	326	2.1
1,000	30	248	3.5	29	285	.5	28	234	2.6	30	152	4.3	23	298	1.8	30	270	3.0	30	221	2.5	30	300	2.3
1,500	30	240	3.3	28	63	.5	23	251	2.8	29	150	4.1	23	292	1.5	30	286	2.4	30	227	2.8	30	298	3.5
2,000	30	229	4.2	25	276	.8	21	247	3.9	28	171	2.9	23	252	1.3	30	287	2.0	28	230	3.1	30	303	4.3
2,500	30	221	5.6	21	284	3.7	15	246	4.6	26	199	1.8	23	268	2.4	30	291	2.1	23	232	3.5	30	304	4.5
3,000	30	226	7.1	20	275	4.7	12	250	6.1	25	229	1.7	22	260	3.5	30	294	1.9	22	236	4.0	30	303	5.4
4,000	27	245	7.7	11	267	7.4	10	279	7.0	22	313	2.9	21	255	5.3	30	306	1.9	19	254	5.3	30	294	6.6
5,000	26	252	7.4				10	280	7.4	20	325	3.9	20	254	5.8	30	309	2.4	17	245	7.6	30	305	7.6
6,000	23	259	8.3							19	293	5.6	17	249	7.5	30	317	2.8	14	267	9.1	30	291	8.8
8,000	21	262	10.3							12	281	11.4	16	259	9.4	29	329	3.6	11	282	13.4	30	294	10.9
10,000	15	274	11.4										13	257	12.8	29	359	5.4				30	283	12.4
12,000																29	328	4.2				28	270	16.4
14,000																28	332	4.4				28	275	14.7
16,000																25	16	2.4				24	280	6.5

* Rawin Data (Cont'd.)

18,000 m., 21 obs., 327 dir., 1.1 speed
20,000 m., 19 obs., 55 dir., 1.9 speed
22,000 m., 16 obs., 99 dir., 2.9 speed

** Rawin Data (Cont'd.)

18,000 m., 29 obs., 201 dir., 1.9 speed
20,000 m., 28 obs., 108 dir., 2.7 speed
22,000 m., 26 obs., 98 dir., 5.5 speed
24,000 m., 23 obs., 92 dir., 6.9 speed
26,000 m., 18 obs., 102 dir., 6.2 speed
28,000 m., 11 obs., 100 dir., 6.6 speed

Rawin Data (Cont'd

18,000 m., 17 obs., 80 dir., 1.1 speed
20,000 m., 12 obs., 89 dir., 3.2 speed

% Rawin Data (Cont'd.)

18,000 m., 21 obs., 250 dir., 1.8 speed
20,000 m., 20 obs., 97 dir., 1.4 speed
22,000 m., 20 obs., 81 dir., 2.5 speed
24,000 m., 17 obs., 78 dir., 5.4 speed
26,000 m., 11 obs., 89 dir., 7.7 speed

These free air resultant winds are based on pilot balloon observations made near 2100 G.C.T.; directions in degrees from north (N = 360°, E = 90°, S = 180°, W = 270°); speeds in meters per second.

RAWIN DATA

Average monthly resultant winds

Table 22 — JUNE 1955

Altitude (meters) m.s.l.	Albuquerque, N. Mex. (1,636 m.)			Anchorage, Alaska (30 m.)			Annette, Alaska (37 m.)			Barrow, Alaska (8 m.)			Bismarck, N. Dak. (505 m.)			Brownsville, Tex. (7 m.)			Buffalo, N. Y. (182 m.)			Burwood, La. (3 m.)			Caribou, Me. (191 m.)			Charleston, S. C. (13 m.)			Columbia, Mo. (237 m.)			El Paso, Tex. (1,195 m.)		
	No. of observations	Direction	Speed	No. of observations	Direction	Speed	No. of observations	Direction	Speed	No. of observations	Direction	Speed	No. of observations	Direction	Speed	No. of observations	Direction	Speed	No. of observations	Direction	Speed	No. of observations	Direction	Speed	No. of observations	Direction	Speed	No. of observations	Direction	Speed	No. of observations	Direction	Speed	No. of observations	Direction	Speed
Surface	30	172	1.5	30	218	3.0	29	208	2.3	30	30	1.4	30	14	1.8	30	124	5.6	30	217	0.6	30	215	1.4	30	290	0.2	30	164	1.2	30	155	1.7	30	243	3.0
500	--	--	--	30	157	3.0	29	173	2.1	30	32	.8	--	--	--	30	137	9.5	30	291	1.7	29	191	1.3	30	262	.8	29	198	3.4	30	141	2.8	--	--	--
1,000	--	--	--	30	134	4.1	29	175	2.6	30	331	.3	30	28	2.0	30	141	7.6	30	316	1.6	29	64	1.1	30	315	1.5	29	264	1.6	30	168	2.0	--	--	--
1,500	--	--	--	29	128	4.7	29	189	3.1	29	220	.3	30	332	1.7	30	142	4.6	30	319	1.6	29	46	1.8	30	343	1.9	30	280	2.8	30	232	1.3	30	259	3.4
2,000	30	237	3.0	29	150	4.4	29	195	4.1	29	219	1.0	30	301	2.3	30	133	3.0	29	303	2.6	29	20	1.9	30	354	2.7	30	275	4.3	30	279	2.6	30	263	4.9
2,500	30	257	4.6	29	164	3.5	29	204	4.7	29	221	1.5	29	300	2.9	30	118	1.7	29	303	2.3	29	342	1.7	30	345	3.3	29	267	5.3	30	294	3.6	30	267	5.6
3,000	29	267	5.9	29	165	3.3	29	216	6.0	28	208	2.7	28	290	2.9	30	37	.7	29	333	1.9	29	318	2.7	30	356	3.5	28	270	4.9	30	292	5.3	30	266	6.6
4,000	29	265	7.6	29	149	3.1	28	234	6.5	28	228	3.7	27	291	4.4	30	341	2.6	29	352	2.9	28	297	3.4	30	332	4.0	28	275	6.5	30	298	6.8	30	265	6.7
5,000	28	275	9.0	30	159	3.1	26	240	7.2	28	221	5.3	27	289	5.7	30	317	3.4	30	359	3.9	29	294	5.5	30	330	5.1	24	271	7.4	29	299	7.5	27	273	6.9
6,000	28	278	10.3	30	155	2.7	25	239	8.1	28	229	5.9	26	300	7.1	29	295	4.8	30	350	4.2	27	286	7.4	29	331	3.5	21	264	7.3	29	294	8.5	25	280	6.3
8,000	25	283	12.6	29	141	3.1	16	239	4.0	25	231	7.8	20	263	6.5	29	267	8.0	30	349	6.1	25	278	10.6	26	360	5.5	20	268	12.0	29	277	10.8	17	298	8.2
10,000	23	281	13.0	27	162	2.9	14	207	4.5	24	223	9.6	19	241	7.5	28	272	12.1	29	330	8.5	23	271	14.1	23	301	8.1	17	268	18.3	29	280	15.2	15	296	10.5
12,000	19	291	16.7	25	181	3.5	11	206	5.6	23	212	6.1	16	246	6.3	24	266	16.5	29	316	10.2	19	290	15.2	21	260	9.9	13	262	17.2	29	279	20.3	10	323	12.6
14,000	10	283	11.6	23	180	5.4	11	204	3.8	23	206	4.8	14	205	4.4	19	276	15.4	24	342	7.1	16	300	14.6	19	276	6.6	10	279	16.5	28	282	15.0			
16,000	10	278	9.3	21	161	3.7	11	225	2.5	23	198	5.2	11	253	1.1	10	304	5.0	21	327	3.8	12	307	8.3	17	285	7.3				27	294	6.2			
18,000				20	139	3.1	11	118	2.5	24	191	2.5	10	92	2.1				12	34	2.1	10	78	2.9	16	307	4.4				23	343	1.6			
20,000				15	103	1.3	11	97	3.3	24	141	2.0													14	353	2.4				20	69	3.4			
22,000				12	102	3.4	10	103	6.3	21	113	3.3													10	32	4.6				18	83	6.2			
24,000																															14	86	6.5			

Altitude (meters) m.s.l.	Fairbanks, Alaska (135 m.)			Ft. Huachuca, Ariz. (1,428 m.)			Grand Junction, Colo. (1,473 m.)			Greensboro, N. C. (275 m.)			Hatteras, N. C. (3 m.)			Int. Falls, Minn. (360 m.)			Little Rock, Ark. (80 m.)			Medford, Ore. (401 m.)			Miami, Fla. (4 m.)			Midland, Tex. (871 m.)			Nantucket, Mass. (14 m.)			Nashville, Tenn. (180 m.)		
	No. of observations	Direction	Speed	No. of observations	Direction	Speed	No. of observations	Direction	Speed	No. of observations	Direction	Speed	No. of observations	Direction	Speed	No. of observations	Direction	Speed	No. of observations	Direction	Speed	No. of observations	Direction	Speed	No. of observations	Direction	Speed	No. of observations	Direction	Speed	No. of observations	Direction	Speed	No. of observations	Direction	Speed
Surface	30	234	1.9	30	233	3.5	30	343	0.9	30	217	0.0	30	221	1.8	30	109	0.6	30	195	0.4	30	320	4.9	30	132	1.1	30	133	3.1	30	231	1.5	30	194	0.4
500	29	254	2.2	--	--	--	--	--	--	30	226	.9	27	265	3.2	30	174	1.0	30	164	1.7	30	317	5.5	30	147	2.7	--	--	--	30	274	3.4	30	19	.3
1,000	29	257	2.1	--	--	--	--	--	--	30	269	1.9	28	275	4.1	30	206	2.0	30	197	2.0	30	317	6.1	30	146	3.0	30	144	4.9	30	306	3.0	30	269	1.4
1,500	29	236	2.2	30	245	4.7	30	342	.9	30	286	2.5	28	279	4.3	30	232	1.6	30	220	2.2	30	311	4.2	30	163	2.2	30	162	7.8	30	313	3.5	29	243	1.8
2,000	30	227	2.5	30	265	7.4	30	263	3.3	30	291	3.0	27	287	4.6	30	244	1.8	30	271	2.0	30	311	3.3	30	201	2.0	30	166	5.0	30	306	3.4	29	267	2.8
2,500	30	215	3.2	30	260	7.4	30	249	5.1	30	287	3.7	27	288	6.4	30	223	1.5	30	292	3.3	30	315	2.9	30	215	2.7	30	205	3.1	30	295	3.2	29	293	3.4
3,000	29	221	3.2	30	253	7.0	30	246	5.7	30	291	4.5	28	276	6.7	30	214	2.0	30	300	4.6	30	310	2.0	30	225	2.8	30	259	3.1	29	299	3.6	29	301	4.7
4,000	28	195	3.5	30	240	5.8	30	240	6.6	30	290	6.4	28	277	9.6	29	228	1.6	30	299	6.9	30	270	2.7	30	240	3.8	30	304	7.9	28	265	5.0	28	296	5.1
5,000	28	185	2.8	30	243	6.4	29	251	7.9	29	282	8.3	28	276	10.2	28	192	1.0	29	298	7.6	30	264	5.5	29	238	4.3	29	303	10.3	26	270	5.2	28	303	6.4
6,000	27	189	4.2	29	247	8.9	28	259	9.6	26	285	9.5	27	277	11.9	28	202	1.9	29	290	7.6	29	274	6.4	28	255	5.4	29	297	10.3	26	265	7.0	27	302	7.8
8,000	24	187	5.3	28	250	12.1	25	278	11.9	25	272	13.8	25	271	15.3	26	177	3.3	25	299	8.6	26	276	10.9	27	263	7.9	27	287	11.8	21	259	6.9	26	293	11.5
10,000	19	148	4.7	28	250	16.9	22	285	13.7	21	264	14.4	20	261	17.9	23	170	6.0	23	283	12.2	22	263	13.0	26	260	10.4	21	269	13.2	20	251	13.0	22	293	12.3
12,000	19	176	5.8	25	259	20.8	14	266	17.8	18	265	19.6	17	263	21.1	19	168	3.6	19	293	17.1	18	272	13.4	23	278	10.4	17	263	15.4	18	268	12.4	20	292	16.6
14,000	17	168	5.0				10	267	16.4	15	275	14.4	16	271	17.4	14	13	1.2	17	288	17.4	15	249	8.6	22	279	11.7	12	260	14.9	16	275	9.8	19	286	14.9
16,000	17	169	3.9										15	291	7.4	10	100	2.5	14	304	8.7	13	245	6.2	17	320	5.3				15	260	3.7	19	303	8.0
18,000	16	179	3.0										15	339	6.0							11	231	1.1	14	92	3.7				16	248	2.4	17	356	2.6
20,000	15	140	2.8										15	99	5.2							11	105	2.7	14	75	7.3				15	71	4.2	17	74	4.6
22,000	13	102	3.9										14	89	9.6										12	87	14.5				14	87	7.0	17	89	6.9
24,000	10	91	5.5										10	95	9.6																10	88	7.6	14	84	6.9

Altitude (meters) m.s.l.	Nome, Alaska (7 m.)			Oakland, Calif. (8 m.)			Oklahoma City, Okla. (392 m.)			Rapid City, S. Dak. (980 m.)			St. Cloud, Minn. (318 m.)			St. Paul, Is., Alaska (10 m.)			San Antonio, Tex. (242 m.)			San Juan, P. R. (28 m.)			Santa Maria, Calif. (72 m.)			Sault Ste. Marie, Mich. (221 m.)			Spokane, Wash. (726 m.)			Tatoosh Is., Wash. (31 m.)		
	No. of observations	Direction	Speed	No. of observations	Direction	Speed	No. of observations	Direction	Speed	No. of observations	Direction	Speed	No. of observations	Direction	Speed	No. of observations	Direction	Speed	No. of observations	Direction	Speed	No. of observations	Direction	Speed	No. of observations	Direction	Speed	No. of observations	Direction	Speed	No. of observations	Direction	Speed	No. of observations	Direction	Speed
Surface	30	211	2.3	30	273	4.6	30	151	4.0	30	341	1.1	30	112	0.6	30	240	1.6	30	126	4.1	30	115	2.2	30	297	4.5	30	278	1.1	30	221	1.6	30	204	2.2
500	30	191	1.0	30	284	5.5	28	152	5.1	--	--	--	30	122	1.2	30	241	3.7	30	124	7.1	29	109	7.5	30	320	4.4	30	276	2.3	--	--	--	30	239	3.1
1,000	30	160	1.8	30	281	5.3	28	172	6.5	30	345	1.3	30	192	1.8	28	253	3.7	30	141	6.8	29	107	8.2	30	326	5.2	30	278	2.4	30	231	3.0	30	242	2.7
1,500	30	147	2.9	30	287	3.7	27	198	5.1	30	329	2.4	30	219	2.1	28	265	4.0	30	158	4.0	30	104	7.8	29	357	3.8	30	272	2.0	30	241	3.9	30	252	3.4
2,000	30	143	3.2	30	312	2.7	28	237	4.2	30	317	2.5	30	251	2.6	28	271	4.5	30	206	2.7	30	99	7.6	29	11	3.0	30	273	1.4	30	242	4.1	30	256	3.7
2,500	29	156	3.8	30	316	2.4	27	266	4.8	30	300	2.3	30	259	2.7	28	279	5.6	30	235	3.0	30	103	7.0	28	346	3.2	30	308	1.4	30	246	4.6	30	261	4.3
3,000	29	152	3.7	30	320	2.3	29	274	6.0	30	291	3.3	30	268	2.5	28	277	6.2	30	261	2.4	30	102	6.1	28	316	3.6	30	323	.7	30	257	5.1	30	267	5.9
4,000	29	166	4.3	30	301	2.8	29	281	7.2	30	295	4.7	29	281	2.3	29	275	7.2	29	319	4.3	30	99	5.3	28	289	5.0	30	277	.9	30	270	5.2	30	263	7.5
5,000	29	154	4.6	30	303	4.8	30	290	8.9	28	299	7.2	29	249	2.1	29	278	8.3	29	316	5.5	30	97	4.6	28	266	5.2	30	315	1.6	30	256	6.3	29	264	6.2
6,000	29	154	4.8	30	291	6.1	29	294	9.5	28	294	7.7	29	222	2.5	27	275	8.3	29	298	6.9	30	98	4.4	28	266	6.2	29	321	2.1	30	261	8.2	28	265	10.4
8,000	28	156	9.7	30	288	7.9	27	267	12.4	28	293	9.7	28	205	3.3	25	266	7.4	29	285	10.4	29	132	1.9	26	255	7.8	29	338	2.1	29	269	10.3	25	265	13.5
10,000	25	177	7.3	30	287	10.6	26	279	17.2	28	276	13.0	27	249	4.7	19	252	8.7	28	280	15.5	29	265	.4	26	245	9.2	28	335	2.7	27	268	10.9	25	263	16.3
12,000	20	186	4.2	30	274	12.3	24	271	20.8	28	268	12.9	27	256	8.3	17	253	6.9	28	273	19.1	29	299	2.7	26	249	13.2	27	343	4.9	26	267	9.6	24	264	13.0
14,000	20	180	4.2	30	259	10.0	21	270	18.0	27	279	8.3	26	276	5.0	16	209	5.6	25	271	15.7	28	299	7.2	26	249	13.9	21	322	5.8	25	246	6.9	22	240	8.0
16,000	19	183	2.9	30	249	6.3	16	274	7.9	24	279	3.4	27	298	1.3	14	199	3.5	23	273	6.4	25	338	1.7	26	250	6.5	18	355	3.8	26	220	3.6	22	219	4.3
18,000	19	164	3.1	28	161	.4	14	212	1.1	21	94	1.1	26	35	1.8	14	184	3.5	20	74	1.4	21	79	4.7	24	19	.4	12	43	2.7	25	151	1.8	23	161	2.6
20,000	19	121	4.2	28	85	3.1	11	80	4.3	17	101	4.2	24	85	2.8	13	162	2.4	14	85	8.9	21	85	10.3	21	75	4.8				23	104	4.0	23	111	4.2
22,000	17	111	5.0	25	82	6.2	10	85	7.3	10	92	5.8	19	82	5.2	11	101	4.1	14	91	11.8	20	90	14.7	17	87	8.2				20	90	5.6	23	103	5.9
24,000	15	99	6.2	18	88	6.7							10	79	5.4				10	86	12.5	18	94	14.9	10	82	9.8				13	94	7.3	23	94	7.2
26,000				14	83	8.0																												14	91	7.6

Altitude (meters) m.s.l.	Washington, D. C. (88 m.)			Yakutat, Alaska (12 m.)		
	No. of observations	Direction	Speed	No. of observations	Direction	Speed
Surface	30	261	0.4	29	210	1.3
500	30	312	2.6	29	141	2.5
1,000	30	327	3.6	28	145	2.9
1,500	30	330	3.5	28	152	2.6
2,000	30	327	2.8	28	166	2.2
2,500	30	304	3.3	28	166	1.9
3,000	30	304	3.4	28	189	2.4
4,000	30	301	5.5	28	208	2.0
5,000	30	303	7.1	27	220	3.8
6,000	30	301	7.9	28	220	3.6
8,000	30	290	10.7	27	247	4.2
10,000	30	284	14.8	27	252	4.4
12,000	30	278	16.9	25	212	6.5
14,000	29	281	13.8	24	221	4.2
16,000	26	279	7.0	24	201	3.3
18,000	25	304	1.5	20	196	2.6
20,000	22	73	2.4	20	134	1.5
22,000	20	91	5.7	18	102	4.6
24,000	18	92	7.2			
26,000	10	84	7.2			

These free-air resultant winds are based on rawin observations made near 0300 G.C.T.; directions in degrees from north (N = 360°, E = 90°, S = 180°, W = 270°); speeds in meters per second.

Note: Resultants prepared from rawins at high altitudes are biased toward lower wind speeds. Values appearing in this table should therefore be used with caution when the number of observations missing is greater than three. See note following Table 22 in the January 1950 issue of the CLIMATOLOGICAL DATA, National Summary.

RAWIN DATA

Average monthly resultant winds

Table 22 *Air Force Data for February 1955

Altitude (meters) m.s.l.	Denver, Colo. (1,661 m.)			Ft. Worth, Tex. (178 m.)			Ogden, Utah (1,450 m.)			Rantoul, Ill. (227 m.)			Rome, N. Y. (146 m.)		
	No. of observations	Direction	Speed	No. of observations	Direction	Speed	No. of observations	Direction	Speed	No. of observations	Direction	Speed	No. of observations	Direction	Speed
Surface	27	132	0.9	28	161	0.8	28	96	1.3	28	171	0.9	27	250	0.3
500	--	---	----	28	180	4.1	--	---	----	28	205	3.7	27	240	1.8
1,000	--	---	----	28	202	5.9	--	---	----	28	222	7.1	25	256	6.0
1,500	--	---	----	28	227	7.0	28	121	1.1	28	251	6.3	25	263	8.4
2,000	26	297	1.6	28	249	8.5	28	235	2.7	28	258	7.8	25	275	9.2
2,500	26	301	4.3	28	257	9.5	28	259	4.8	26	256	10.1	25	279	11.2
3,000	26	296	5.8	28	262	12.4	28	281	6.2	26	259	11.9	26	277	12.4
4,000	27	288	9.3	28	263	16.2	28	293	9.5	26	255	15.5	26	269	15.1
5,000	27	291	12.4	28	259	20.4	28	302	12.2	27	257	18.4	26	271	18.9
6,000	27	295	13.6	28	257	24.2	28	299	15.1	27	256	23.3	26	270	23.5
8,000	27	293	17.7	28	256	29.6	28	295	18.6	27	259	31.4	25	271	30.3
10,000	26	286	22.5	27	257	37.5	27	296	24.2	27	262	37.5	25	274	36.6
12,000	24	275	23.4	27	251	43.2	22	291	25.1	24	269	35.7	20	274	31.0
14,000	23	269	22.6	22	255	38.1	18	292	20.7	23	268	33.2	19	272	29.4
16,000	21	269	19.6	14	259	33.0	17	290	18.4	21	274	21.3	15	274	24.6
18,000	14	267	13.8				13	301	12.5	15	270	18.2			
20,000										10	265	17.6			

* March data for the above Air Force stations will be included in the July issue of this publication.

These free-air resultant winds are based on rawin observations made near 0300 G.C.T.; directions in degrees from north (N = 360°, E = 90°, S = 180°, W = 270°); speeds in meters per second.

Note: Resultants prepared from rawins at high altitudes are biased toward lower wind speeds. Values appearing in this table should therefore be used with caution when the number of observations missing is greater than three. See note following Table 22 in the January 1950 issue of the CLIMATOLOGICAL DATA, National Summary.

CORRECTIONS

page 100: Aklavik, MacKenzie

Month: Annual 1954

The January amount should be 5.

page 435: Columbus, Ohio

Month: November 1954 - May 1955

Corrected solar radiation data for this period are listed on page 227.

SOLAR RADIATION DATA

Table 30 Solar radiation intensities, tabulated in langleys per minute on a surface normal to the direction of the sun. JUNE 1955

ALBUQUERQUE, N. MEX.

Date	Sun's zenith distance: A.M. 78.7°	75.7°	70.7°	60.0°	0.0°	P.M. 60.0°	70.7°	75.7°	78.7°
	Air mass: 4.08	3.26	2.44	1.63	N	1.63	2.44	3.26	4.08
June									
2	0.85	0.92	1.03	1.17	1.36	----	----	----	----
3	.79	.87	.99	1.14	1.35	1.15	1.01	0.88	0.79
6	.85	.95	1.06	1.22	1.38	1.21	1.04	.97	.90
7	.93	1.01	1.12	1.26	1.41	1.26	1.10	1.00	.94
8	.91	.98	1.09	1.23	1.38	1.19	1.06	.95	----
9	----	D.40	D.54	D.70	D1.04	----	----	----	----
10	D.52	D.59	D.77	D.94	D1.27	----	----	----	----
12	.58	.67	----	----	----	----	----	----	----
14	.70	.76	.85	1.00	----	----	D.80	D.68	D.49
15	.63	.73	.90	1.09	1.36	1.20	1.08	.98	.94
16	.85	.92	1.03	1.19	1.39	----	----	----	----
17	.81	.89	1.03	1.20	1.39	1.18	1.04	.87	.80
18	.79	.82	1.00	1.04	1.32	1.15	1.00	.87	.81
19	.75	.83	.96	1.10	1.34	1.14	.99	.85	.76
20	D.49	D.59	.73	.95	1.23	1.04	.82	----	----
21	.38	.48	.64	.80	1.19	----	----	----	----
22	.63	.72	.85	1.04	1.27	----	----	----	----
25	----	----	.94	1.12	1.30	----	----	----	----
26	.76	.83	.99	1.13	----	----	----	----	----
27	.43	.53	.64	----	----	----	----	----	----
28	----	----	----	.96	1.26	1.04	.88	.76	.69
29	.77	.87	.97	1.15	1.30	1.08	.96	.78	.69
30	.85	.93	1.06	1.21	1.38	1.18	1.04	.93	.85
Averages	.71	.78	.91	1.08	1.31	1.15	.99	.88	.79

MADISON, WIS.

	Air mass: 4.81	3.84	2.88	1.92	N	1.92	2.88	3.84	4.81
June									
1	0.64	----	----	----	----	----	----	----	----
14	----	0.83	0.96	1.15	1.32	----	----	----	----
15	----	----	.97	1.12	1.37	----	----	----	----
16	.73	.83	.96	1.15	1.36	0.96	0.70	0.52	0.41
20	----	----	.94	1.10	----	----	----	----	----
21	.86	.99	1.11	1.25	1.39	----	----	----	----
22	.83	.94	1.06	1.28	1.47	1.17	1.00	----	----
26	----	----	----	----	1.38	1.02	.80	.66	.55
27	----	.73	.88	1.06	1.29	----	----	----	----
28	.63	.75	.88	1.01	1.03	----	----	----	----
Averages	.74	.85	.97	1.14	1.33	1.05	.83	.59	.48

LINCOLN, NEBR.

	Air mass: 4.77	3.81	2.86	1.91	*0.95	1.91	2.86	3.81	4.77

No Data during June 1955

TABLE MOUNTAIN, CALIF.

	Air mass: 3.76	3.01	2.26	1.51	N	1.51	2.26	3.01	3.76
June									
20	----	----	----	1.45	----	----	----	----	----
24	----	----	----	1.37	----	----	----	----	----
29	----	----	----	1.39	----	----	----	----	----
Averages	----	----	----	1.40	----	----	----	----	----

WASHINGTON, D.C. (WBCO)

	Air mass: 4.95	3.96	2.97	1.98	N	1.98	2.97	3.96	4.95
June									
6	----	----	----	0.98	----	----	----	----	----
12	----	----	----	1.09	1.31	----	----	----	----
13‡	----	----	----	.89	----	----	----	----	----
15	----	----	----	.66	----	----	----	----	----
16	----	----	----	----	----	1.01	----	----	----
17	----	----	----	1.00	----	----	----	----	----
22	----	----	----	.76	----	----	----	----	----
27	----	----	----	.61	----	----	----	----	----
28	----	----	----	.91	----	----	----	----	----
29	----	----	----	.90	----	----	----	----	----
30	----	----	----	.67	1.23	----	----	----	----
Averages	----	----	----	.85	1.27	----	----	----	----

BLUE HILL, MASS.

	Air mass: 4.86	3.89	2.92	1.94	*0.97	1.94	2.92	3.89	4.86
June									
15**	0.31	0.59	0.73	0.90	----	----	0.77	0.67	0.60
17	----	.71	.86	1.04	----	0.99	.90	----	----
18	.53	.62	.74	.92	----	.87	----	.58	.50
21	.20	.25	.40	.53	----	----	----	----	----
23	----	----	.73	.96	----	----	----	----	----
25	.40	.48	.61	----	----	----	----	----	----
28	----	----	.51	.71	----	.73	.53	----	----
29	.55	.66	.79	.94	----	----	----	----	----
Averages	.40	.55	.67	.86	----	.89	.73	.63	.55

N Solar Noon
‡ Sky milky from 13th
* Extrapolated
** Haze and smoke most of the month
D Dust

Langley is the unit used to denote one gram calorie per square centimeter. An explanation of Tables 30 and 31 and references to descriptions of instruments, stations, and methods of observation, and to summaries of data, are given in the Monthly Weather Review, vol. 72, No. 1, January 1944, p. 43. A list of pyrheliometric stations is given on page 45 of that issue. An explanation of the formula used in computing the air mass values for each station listed in Table 30 appears in volume 75, No. 3, March 1947, p. 47.

SOLAR RADIATION DATA

Table 31a Daily totals and average daily totals by weeks of solar and sky radiation, plus the radiation reflected from the ground, as received on a vertical surface facing north at Blue Hill, Mass. during the month

								Avg								Avg								Avg
Date----------	4	5	6	7	8	9	10		11	12	13	14	15	16	17		18	19	20	21	22	23	24	
Langleys-------	108	124	161	105	71	126	162	122	174	58	127	184	184	174	180	155	180	165	128	158	133	155	105	146
Date----------	25	26	27	28	29	30	1																	
Langleys-------	177	174	149	169	172	177	180	171																

Table 31b Daily totals and average daily totals by weeks of solar and sky radiation, plus the radiation reflected from the ground, as received on a vertical surface facing east at Blue Hill, Mass. during the month

								Avg								Avg								Avg
Date----------	4	5	6	7	8	9	10		11	12	13	14	15	16	17		18	19	20	21	22	23	24	
Langleys-------	131	134	338	90	75	112	382	180	347	64	217	392	389	335	396	306	373	279	128	319	237	307	116	251
Date----------	25	26	27	28	29	30	1																	
Langleys-------	314	279	278	349	401	364	292	325																

Table 31c Daily totals and average daily totals by weeks of solar and sky radiation, plus the radiation reflected from the ground, as received on a vertical surface facing south at Blue Hill, Mass. during the month

								Avg								Avg								Avg
Date----------	4	5	6	7	8	9	10		11	12	13	14	15	16	17		18	19	20	21	22	23	24	
Langleys-------	131	168	251	103	93	146	245	163	196	82	194	189	261	253	256	204	254	228	204	240	240	242	134	220
Date----------	25	26	27	28	29	30	1																	
Langleys-------	242	237	184	237	240	245	234	231																

Table 31d Daily totals and average daily totals by weeks of solar and sky radiation, plus the radiation reflected from the ground, as received on a vertical surface facing west at Blue Hill, Mass. during the month

								Avg								Avg								Avg
Date----------	4	5	6	7	8	9	10		11	12	13	14	15	16	17		18	19	20	21	22	23	24	
Langleys-------	121	190	348	177	83	159	340	203	168	75	232	216	439	373	401	272	418	201	321	185	260	314	158	265
Date----------	25	26	27	28	29	30	1																	
Langleys-------	246	341	193	349	391	305	391	317																

Table 31e Daily totals and average daily totals by weeks of diffuse (sky) radiation as received on a horizontal surface at Blue Hill, Mass. during the month

								Avg								Avg								Avg
Date----------	4	5	6	7	8	9	10		11	12	13	14	15	16	17		18	19	20	21	22	23	24	
Langleys-------	222	268	230	171	135	224	226	211	280	116	253	282	175	229	141	211	166	350	248	279	264	242	225	253
Date----------	25	26	27	28	29	30	1																	
Langleys-------	324	319	280	233	190	251	294	270																

Note: Langley is the unit used to denote one gram calorie per square centimeter.

NET RADIATION

Table 32.--Net radiation in langleys per day (midnight to midnight) at Raleigh, N. C., during the month

JUNE 195

Date.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	**25	26	27	28	29	30	31	Av
Langleys. . .	360	369	337	*326	391	355	*273	294	238	*318	*200	361	277	241	271	*310	352	*69	*117	*320	308	*305	*260	350	*286	%	164	%	262	336		28

The measurement is made with a Beckman and Whitley net exchange radiometer over a plot of alfalfa. The value represents the total incoming minus the total outgoing radiation of all wave lengths.

These data are of an experimental nature and are published as received from th North Carolina State College at Raleigh. The instrument with which they were measure has not been checked by the Weather Bureau.

* Estimated values owing to occurrence of rain during period. While rain is falling radiation is assumed to be zero.
% Radiometer inoperative.
** Alfalfa mowed.

SOLAR RADIATION DATA

Table 33.-Daily totals and average daily totals by weeks of solar radiation (direct and diffuse) received on a horizontal surface, tabulated in langleys -Continued

	Lake Charles, La.	Lander, Wyo.	Las Vegas, Nev.	Lemont, Ill.	Lincoln, Nebr.	Little Rock, Ark.	Los Angeles, Calif. (WBAS)	Los Angeles, Calif. (WBCO)	Madison, Wis.	Matanuska, Alaska	Medford, Oreg.	Miami, Fla.	Midland, Tex.	Nashville, Tenn.	Newport, R. I.	New York, N. Y.	Oak Ridge, Tenn.	Ottawa, Ontario	Phoenix, Ariz.	Portland, Me.	Rapid City, S. Dak.	Richland, Wash.	Riverside, Calif.	St. Cloud, Minn.	San Antonio, Tex.	Santa Maria, Calif.	S. Ste. Marie, Mich.	Sayville, N. Y.	Schenectady, N. Y.	Seattle, Wash. (U. of W.)	Seattle, Wash. (WBAS)	Spokane, Wash.	State College, Pa.	Stillwater, Okla.	Swan Island, R. I.	Tampa, Fla.	Toronto, Ontario	Upton, N. Y.	Washington, D. C. (Silver Hill Obs.)	Winnipeg, Manitoba
1955																																								
June 4	632	782	738	567	659	445	640	677	482	511	827	733	703	560	361	462	623	742	776	236	634	713	736	567	508	768	695	544	319	213	329	779	722	657	733	713	614	545	657	200
June 5	688	489	753	634	309	355	559	645	626	325	835	746	679	554	380	485	671	668	794	236	433	704	753	273	680	791	663	550	513	320	330	752	687	434	682	717	498	504	739	673
June 6	628	818	749	106	529	582	390	(558)	239	655	836	631	698	358	608	710	434	728	800	658	800	735	669	225	727	679	470	726	843	710	733	825	685	687	683	711	694	690	718	226
June 7	657	837	752	331	743	751	303	518	235	729	---	664	689	454	199	264	294	719	794	413	794	747	682	536	676	741	153	242	532	735	762	809	95	569	688	627	537	207	272	598
June 8	531	324	748	404	463	496	343	686	131	428	720	864	635	149	180	302	77	780	781	291	628	733	746	276	706	625	864	291	428	722	748	821	5	164	(735)	705	555	252	---	291
June 9	293	697	737	161	456	144	179	451	97	604	699	692	413	503	239	84	372	773	766	675	198	691	706	204	565	341	713	149	475	712	733	790	172	488	633	727	676	142	107	173
June 10	471	831	711	188	534	564	431	252	393	148	652	558	656	116	753	737	72	844	782	617	161	737	660	370	544	349	430	821	591	723	750	835	529	441	816	683	691	781	450	205
Averages	557	684	741	342	527	477	406	(541)	315	486	761	670	639	385	389	435	363	722	785	447	521	723	707	350	629	613	541	475	500	591	626	802	414	491	(681)	698	609	446	491	338
June 11	764	754	760	405	76	715	667	597	104	224	633	88	622	479	315	118	506	554	782	453	398	725	764	96	762	165	669	174	234	718	751	803	73	582	676	261	247	190	179	677
June 12	744	489	736	79	203	455	488	597	133	302	751	127	616	370	216	270	355	111	---	49	225	732	700	413	738	453	442	334	146	328	429	776	375	720	687	748	481	308	663	807
June 13	732	747	442	118	618	592	285	215	288	164	725	476	---	302	651	413	254	337	---	374	308	677	198	684	756	141	644	523	249	304	410	767	205	533	700	765	232	558	519	793
June 14	685	324	783	640	723	396	435	199	722	683	494	835	649	599	432	331	536	507	---	424	729	502	564	760	551	(470)	784	567	193	365	501	462	104	517	573	743	534	584	405	787
June 15	553	648	805	662	641	123	633	414	778	506	682	527	698	686	677	751	607	761	804	646	639	730	541	771	667	806	786	772	614	414	520	694	695	572	(677)	603	767	743	558	690
June 16	647	582	796	717	227	644	663	612	761	764	750	341	664	647	708	758	713	721	(819)	592	520	649	677	755	724	803	786	795	516	435	473	825	722	665	695	294	694	741	717	740
June 17	721	825	797	708	370	673	753	713	712	481	739	273	686	683	738	744	690	729	830	723	199	610	758	382	737	803	755	---	535	283	396	543	679	334	597	382	714	733	672	551
Averages	691	624	731	476	408	514	561	478	499	446	682	350	656	538	534	484	523	531	(809)	466	431	661	600	552	705	(520)	695	528	355	407	497	696	407	561	(658)	542	524	554	530	721
June 18	688	723	809	683	592	548	683	750	709	701	740	297	693	604	727	746	663	742	821	704	436	665	760	412	644	829	710	787	588	291	469	668	554	687	553	557	712	755	615	298
June 19	702	786	797	594	719	680	687	661	403	609	772	455	480	695	412	261	564	494	820	560	665	718	772	732	700	856	679	371	490	663	643	809	308	526	535	741	353	388	134	829
June 20	628	686	810	713	677	562	609	641	764	198	758	(575)	720	515	473	747	619	602	820	378	733	727	735	769	537	762	932	868	435	682	682	786	807	748	652	700	492	646	710	590
June 21	631	828	807	804	472	694	742	748	757	312	744	346	721	646	586	488	649	447	797	190	473	716	779	772	718	741	891	521	388	697	721	762	577	696	668	647	522	497	532	854
June 22	645	813	750	560	535	650	734	724	798	343	532	357	565	681	654	550	599	530	781	470	730	608	773	661	696	700	162	746	540	118	238	636	846	687	670	671	527	---	594	715
June 23	652	741	823	773	431	678	741	731	680	380	548	690	717	---	692	682	333	192	724	632	561	631	754	691	667	819	211	773	583	548	735	480	403	745	587	583	346	737	693	811
June 24	675	693	797	613	258	548	700	688	711	244	832	640	742	615	(289)	228	549	405	796	315	384	716	740	689	727	802	424	265	246	312	628	189	804	669	674	705	547	267	834	678
Averages	661	753	798	677	526	623	699	706	689	400	675	(480)	663	626	(545)	529	588	487	794	464	569	683	759	675	670	758	501	591	467	473	588	616	528	680	620	658	500	548	589	596
June 25	731	608	783	725	622	495	261	265	645	147	---	424	573	431	508	416	188	542	817	584	520	523	532	414	719	715	482	535	446	301	509	608	279	653	697	724	573	---	258	772
June 26	746	574	809	623	678	313	339	232	761	282	647	300	662	527	607	716	591	615	513	477	314	548	541	715	577	654	800	637	467	---	341	487	485	685	706	502	688	655	606	758
June 27	711	564	799	744	378	164	598	503	741	294	683	665	575	628	636	499	710	727	807	597	564	713	735	728	652	731	742	557	533	---	293	831	585	504	638	520	707	576	551	(481)
June 28	368	712	808	755	288	651	463	453	724	209	284	528	534	644	625	723	695	704	812	666	660	373	616	390	637	623	722	647	565	311	567	324	700	566	637	372	701	650	700	478
June 29	466	825	779	574	699	601	373	358	446	317	777	571	654	587	698	729	624	627	813	695	764	646	443	628	594	789	---	750	585	422	420	737	646	684	589	524	578	740	693	758
June 30	---	773	803	587	594	566	458	261	639	470	731	451	665	683	642	486	631	498	809	583	778	490	600	684	677	(798)	594	601	460	275	332	547	328	700	215	523	319	555	611	---
July 1	496	826	786	655	674	675	427	396	590	751	(664)	523	887	661	610	436	729	554	809	520	758	435	432	145	510	(741)	624	481	500	362	540	473	294	721	332	344	413	814	538	772
Averages	587	697	795	666	562	495	417	353	649	353	(631)	494	621	594	618	572	595	610	812	589	623	533	557	529	624	(721)	661	601	509	334	429	544	474	645	574	501	589	632	565	(679)

Note.--Langley is the unit used to denote one gram calorie per square centimeter.
Values in parentheses are interpolated.

CONDENSED CLIMATOLOGICAL SUMMARY

Table 1

DELAYED DATA

Section	Temperature: Average	Temperature: Departure from normal	Temperature: Monthly extremes: Station	Highest	Date	Station	Lowest	Date	Precipitation: Average	Precipitation: Departure from normal	Precipitation: Monthly extremes: Station	Greatest	Station	Least
	°F.	°F.		°F.			°F.		In.	In.		In.		In.
November 1954														
Alaska	17.7	4.5	2 Stations	59	4+	Tanacross	-36	30	2.17	0.09	Little Port Walter	39.00	Sheep Mountain	0.13
December 1954														
Alaska	-7.2	-10.0	2 Stations	53	17+	Allakaket	-69	26	1.89	.18	Baranof	31.97	Point Lay	.01
Hawaii	69.3	-.7	US WAG Obsy	86	15	Haleakala RS	32	17	17.43	9.60	Kallua Mauka	67.17	3 Stations	1.02
January 1955														
Alaska	7.4	6.2	2 Stations	49	24+	Allakaket	-72	4	2.20	.40	Little Port Walter	32.56	Chitina	.00
Hawaii	67.3	-.3	Kahului Airport	87	6+	Mauna Loa Upper	22	30	6.06	-1.60	Piihonua	24.00	Pohakuloa	.37
February 1955														
Alaska	-3.0	-7.4	Cape Sarichef Lgt.St.	57	25	2 Stations	-64	15+	1.81	.33	Port Alexander	16.92	Hughes	T
Hawaii	66.7	-1.3	4 Stations	86	4+	Haleakala RS	31	9+	13.20	7.96	Waikamoi Dam	44.18	Waiawa	.82
March 1955														
Alaska	9.7	-.3	Beaver Falls	57	7+	Fort Yukon CAA	-50	3	1.80	.29	Little Port Walter	23.96	Wainwright	T
Hawaii	66.6	-1.5	2 Stations	86	5+	Mauna Loa Upper	20	12	6.20	-1.87	East Honomanu	26.70	Honaunau	.47
April 1955														
Alaska	19.0	-5.3	Ketchikan	60	29	Selawick	-38	1	1.13	.01	Latouche	15.08	Hughes	T
Hawaii	68.5	-.6	2 Stations	88	11+	Mauna Loa Upper	26	6	5.98	-1.32	Piihonua	38.40	3 Stations	.00
Puerto Rico	74.0	-.9	Mayaguez (2)	95	1+	Garzas Dam	42	4	2.94	-1.24	Utuado	9.58	Santa Isabel	.00
May 1955														
Hawaii	69.4	-1.3	Puunene CAA AP	90	8+	Mauna Loa Upper.	29	3	5.11	-.13	East Honomanu	49.04	3 Stations	.00

CLIMATOLOGICAL DATA

Table 2

State and station	Elevation (ground)	Pressure: Station	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No. of days: Max. 90° F. or above	Temperature: No. of days: Min. 32° F. or below	Temperature: Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No. of days: .01 inch or more	Precipitation: No. of days: With thunderstorms	Snow, Sleet, Hail: Total	Snow, Sleet, Hail: Max. depth on ground	Wind: Average hourly speed	Wind: Prevailing direction	Wind: Fastest mile: Speed	Wind: Fastest mile: Direction	Wind: Fastest mile: Date	No. of days (sunrise to sunset): Clear	Partly cloudy	Cloudy	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	Ft.	Mb.	Mb.	°F.	°F.	°F.	°F.	°F.		°F.		#		°F.	%	In.	In.	In.			In.	In.	M. p. h.		M. p. h.			0–3	4–7	8–10	0–10	%
December 1954																															
ALASKA																															
Anchorage	92	995.9	1001.3	13	-1	6.0	-7.8	28	20	-29	26+	0	31	-3	63	1.00	0.16	0.32	10	0	19.0	16	4.9	N	*37	SW	17	6	9	16	6.6	46
Annette	110	1001.4	1005.4	41	32	36.4	.3	53	17	15	29	0	16	33	86	20.19	11.08	3.61	27	1	15.7	5	18.2	SSE	*58	SSE	19	2	3	26	8.7	--
Barrow	22	1011.5	1012.0	-9	-22	-15.6	-5.2	5	7	-35	17+	0	31	-29	52	.07	-.13	.06	3	0	.9	9	8.2	---	24	NE	1+	a	a	a	a	--
Bethel	21	1006.1	1007.8	4	-14	-5.0	-12.2	33	5+	-40	26	0	31	-10	75	1.28	.43	.42	14	0	17.4	15	11.6	N	*27	NNE	27	10	5	16	6.0	--
Cordova	40	995.3	996.9	29	11	19.9	-6.7	43	19	-18	27	0	30	16	83	5.25	-1.71	2.15	16	0	23.5	11	6.0	E	*31	E	16	8	2	21	7.0	--
Fairbanks	436	990.5	1009.3	-13	-30	-21.5	-12.4	27	1	-54	26	0	31	-29	70	.48	-.02	.08	10	0	9.8	13	1.5	N	17	SW	1	11	5	15	5.9	--
Juneau	15	1001.4	1002.3	32	24	28.1	.5	48	18	-7	29	0	21	23	81	5.42	1.25	1.08	23	0	23.5	10	10.0	ESE	43	SE	18	1	0	30	9.5	11
Kotzebue	10	1011.2	1011.9	-12	-23	-17.2	-13.5	25	1	-37	29	0	31	-23	74	.07	-.28	.06	2	0	3.3	11	9.0	NE	*50	ESE	4	15	5	11	4.5	--
McGrath	334	994.9	1008.9	-11	-27	-19.1	-11.8	32	1	-54	26+	0	31	-25	74	1.43	.18	.43	14	0	14.3	19	1.9	NNW	*23	SSW	1	9	4	18	6.5	--
Nome	13	1009.1	1009.9	5	-13	-5.1	-12.8	26	1	-30	25+	0	31	-13	67	.10	-1.06	.05	3	0	1.4	7	7.4	N	50	NE	6	15	4	12	4.8	53
Northway	1713	941.4	1009.2	-15	-29	-21.9	-7.1	9	20	-58	28	0	31	-27	73	.51	.14	.17	11	0	11.5	14	2.7	NW	*20	NW	26	5	5	21	7.6	--
St. Paul Island	22	1007.8	1008.9	30	20	25.2	-4.1	41	4+	3	17	0	29	21	82	1.16	-.83	.50	19	0	5.7	6	----	---	--	---	--	1	6	24	8.7	--
Yakutat	28	997.3	998.4	31	18	24.8	-3.0	45	18	-8	30	0	27	22	86	14.11	1.80	1.77	25	0	84.5	30	10.1	ESE	*45	SE	18	6	1	24	8.2	--
January 1955																															
ALASKA																															
Anchorage	92	997.0	1002.0	26	10	18.2	5.2	45	9	-8	7	0	30	12	72	1.12	.36	.48	8	0	21.1	18	5.1	N	*35	E	9	6	2	23	7.7	38
Annette	110	1009.1	1013.2	42	33	37.7	3.1	47	6+	20	2	0	12	35	88	17.33	7.93	3.30	24	0	7.7	9	14.8	SE	*40	ESE	4	3	2	26	8.7	--
Barrow	22	1011.9	1012.4	-9	-19	-14.0	1.1	9	12	-41	3	0	31	-26	53	.06	-.10	.05	2	0	1.1	10	11.0	NE	26	NE	12	b	b	b	b	--
Bethel	21	993.2	994.6	23	6	14.5	7.7	36	26	-38	3	0	31	12	86	1.24	.34	.59	13	0	12.6	20	11.6	ENE	*34	NNE	2	6	1	24	7.6	--
Cordova	40	1001.7	1003.6	37	24	30.4	5.4	43	21	-1	1	0	27	28	86	10.48	3.43	1.92	25	0	25.3	12	7.7	E	*35	E	2	2	1	28	9.1	--
Fairbanks	436	987.1	1005.3	8	-15	-3.2	6.6	37	9	-35	5	0	31	-8	78	.49	-.50	.16	7	0	10.3	20	1.9	N	17	E	9	7	7	17	6.9	--
Juneau	15	1009.5	1010.4	35	29	32.1	5.9	43	27	10	1	0	20	29	89	4.03	-.45	.88	22	0	20.2	11	7.8	ESE	35	SE	2	1	1	29	9.5	11
Kotzebue	10	1004.1	1004.5	9	-5	2.3	8.9	31	10	-36	5	0	31	-3	79	.32	-.15	.09	9	0	10.6	19	12.2	E	*32	ENE	23	0	6	19	6.9	--
McGrath	334	988.8	1002.3	9	-11	-.9	7.8	36	9	-45	4	0	31	-5	79	.80	-.34	.26	11	0	8.0	26	1.6	NNW	*20	NNW	3	2	6	23	6.5	--
Nome	13	998.6	999.2	20	7	13.3	7.7	35	26	-21	4+	0	31	8	79	.77	-.48	.27	14	0	12.6	12	13.8	E	46	N	1	7	5	19	7.0	47
Northway	1713	943.8	1010.8	-5	-20	-12.4	4.7	4	10+	-41	1	0	31	-18	76	.12	-.49	.08	3	0	1.9	15	1.7	S	*25	NW	6	5	5	21	7.5	--
St. Paul Island	22	986.5	987.4	30	22	26.3	-.1	37	1+	12	3+	0	31	24	88	.81	-1.01	.26	12	0	8.5	10	----	---	--	---	--	1	5	25	8.5	--
Yakutat	28	1005.8	1006.7	36	26	31.1	4.6	40	2+	9	17	0	23	30	93	17.12	5.52	1.99	24	0	53.2	17	10.6	ESE	*37	SE	2	3	1	27	8.8	--
February 1955																															
Anchorage	92	1008.8	1013.8	24	7	15.4	-3.2	40	19	-18	8	0	28	7	67	3.07	2.49	.86	16	0	48.5	27	7.4	N	*23	SSE	19+	4	3	21	8.0	33
Annette	110	1012.9	1017.1	39	30	34.7	-1.4	45	21	15	26	0	15	30	82	11.17	4.13	1.94	22	0	9.0	5	14.9	SE	*40	SSE	5	3	1	24	8.7	--
Barrow	22	1026.8	1027.2	-21	-32	-26.3	-8.4	18	25	-50	14+	0	28	-34	46	.12	-.03	.05	5	0	1.7	12	12.6	NSW	29	E	3+	14	6	8	4.4	--
Bethel	21	1015.9	1017.5	10	-9	.2	-8.9	37	25	-37	7	0	28	-5	78	1.12	.30	.47	18	0	8.7	23	12.9	NE	*29	NE	8+	7	6	15	6.9	--
Cordova	40	1008.8	1010.6	35	20	27.8	1.7	42	20+	-3	8	0	27	23	81	5.51	.24	.93	17	0	19.2	9	7.9	E	*29	N	27	4	5	19	7.9	--
Fairbanks	436	1002.7	1021.2	-1	-25	-12.3	-9.2	22	26	-45	9	0	28	-21	64	.60	.09	.16	13	0	16.4	22	3.4	N	33	W	26	6	6	19	6.7	--
Juneau	15	1014.2	1015.1	34	24	29.3	2.0	41	4+	2	26	0	20	23	77	3.30	-.05	.64	21	0	23.6	5	8.9	ESE	36	SE	17	2	3	23	8.8	31
Kotzebue	10	1024.7	1025.4	-13	-27	-19.9	-15.2	19	24	-47	19	0	28	-28	68	.18	-.14	.05	7	0	3.7	15	10.9	ESE	*30	WNW	26+	17	5	6	3.4	--
McGrath	334	1007.5	1021.1	1	-19	-8.9	-9.3	29	26	-51	13	0	28	-15	73	.96	-.19	.20	17	0	9.6	31	3.7	NW	*17	NW	27	6	3	19	7.5	--
Nome	13	1022.6	1023.1	3	-15	-5.8	-11.5	26	25	-33	16	0	28	-13	68	.26	-.67	.10	7	0	4.0	15	8.3	NE	57	NE	10	15	4	9	4.1	68
Northway	1713	952.6	1019.8	-2	-21	-11.3	-1.9	19	25	-51	9	0	28	-17	73	.31	-.03	.11	12	0	7.7	19	5.7	NW	*24	NW	5+	3	2	23	8.3	--
St. Paul Island	22	1012.2	1013.4	30	21	25.6	1.8	36	25	8	12	0	28	24	89	1.21	.08	.23	17	0	13.6	16	----	---	--	---	--	0	4	24	9.0	--
Yakutat	28	1010.8	1012.2	35	22	28.3	.3	45	4	3	8	0	26	25	86	13.34	4.73	2.06	23	0	77.8	38	10.7	ESE	*37	SE	10	2	3	23	8.6	--

CLIMATOLOGICAL DATA

State and station	Elevation (ground)	Pressure: Station	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No. of days Max. 90° F. or above	Temperature: No. of days Min. 32° F. or below	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No. of days .01 inch or more	Precipitation: No. of days With thunderstorms	Snow, Sleet, Hail: Total	Snow, Sleet, Hail: Max. depth on ground	Wind: Average hourly speed	Wind: Prevailing direction	Wind: Fastest mile Speed	Wind: Fastest mile Direction	Wind: Fastest mile Date	No. of days (sunrise to sunset): Clear	Partly cloudy	Cloudy	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	Ft.	Mb.	Mb.	°F.	°F.	°F.	°F.	°F.		°F.				°F.	%	In.	In.	In.			In.	In.	M. p. h.		M. p. h.			0— 3	4— 7	8— 10	0—10	%
March 1955																																
Anchorage	92	1007.5	1012.7	32	14	23.1	-1.7	46	6	-12	2	0	30	12	62	.51	-.09	.23	8	0	8.6	21	8.2	N	*29	NNE	20	11	2	18	6.4	57
Annette	110	1012.2	1016.4	39	28	33.2	-4.9	50	30	1	3	0	21	27	76	11.43	2.75	3.18	18	0	16.8	3	13.6	NNW	*38	SE	26	5	5	21	7.6	--
Barrow	22	1024.2	1025.0	-13	-24	-18.5	-3.6	0	23	-35	13	0	31	-33	47	.06	-.06	.04	3	0	.7	13	12.2	NE	31	E	16	15	8	8	4.4	--
Bethel	21	1010.3	1011.7	24	3	13.6	2.1	41	5+	-22	11	0	31	10	84	1.28	.36	.31	14	0	11.6	25	12.4	NNE	*29	WSW	9+	6	8	17	6.8	--
Cordova	40	1009.6	1011.4	37	20	28.4	-1.7	47	28	-3	8	0	30	23	77	4.75	-1.17	.95	15	0	26.9	15	6.7	E	*30	E	26	4	9	18	7.3	--
Fairbanks	436	996.8	1014.8	25	-5	10.1	1.1	44	6	-39	2	0	31	2	69	.52	-.06	.13	10	0	12.4	22	3.9	N	19	NE	20	9	5	17	6.4	--
Juneau	15	1014.0	1014.9	35	21	27.8	-5.0	49	30	-10	3	0	29	20	74	4.72	1.25	1.12	22	0	19.4	6	9.5	ESE	34	E	26	7	3	21	7.4	41
Kotzebue	10	1015.3	1016.0	9	-12	-1.5	.1	27	30	-32	12	0	31	-6	81	.36	.09	.14	11	0	8.5	20	11.1	NE	*51	ENE	4	7	6	18	6.9	--
McGrath	334	1000.6	1015.9	25	-1	12.2	4.9	43	29	-27	12	0	31	6	72	2.12	1.14	.57	14	0	14.7	38	4.0	N	*18	SSW	8	9	5	17	6.4	--
Nome	13	1012.3	1013.0	16	-5	5.5	-3.0	30	8+	-21	11	0	31	1	80	.79	-.12	.21	13	0	14.5	24	9.0	E	43	E	15	7	9	15	6.7	54
Northway	1713	949.5	1015.3	22	-9	6.6	-.3	42	28	-46	2	0	31	1	75	.24	.02	.14	6	0	4.4	20	5.8	NW	*21	NW	10	9	5	17	6.7	--
St. Paul Island	22	1009.4	1010.5	29	19	23.8	-.7	38	7+	8	6+	0	31	21	87	.78	-.39	.17	16	0	10.3	17	----	---	--	---	--	3	8	20	8.1	--
Yakutat	28	1011.3	1012.4	36	22	29.0	-1.8	46	31	-3	2	0	28	25	83	11.25	1.36	1.86	20	0	74.7	66	10.1	ESE	*40	SE	26	3	6	22	8.2	--
April 1955																																
Anchorage	92	1002.4	1007.4	39	23	31.1	-4.3	48	29+	12	11	0	29	20	63	1.32	.92	.59	11	0	18.7	19	7.6	N	*21	SSW	6+	7	5	18	6.7	60
Annette	110	1006.4	1010.7	47	34	40.3	-2.3	57	29	30	14+	0	10	34	80	10.51	2.38	4.14	17	0	3.5	T	12.8	SE	*42	SSE	9	6	8	16	7.0	--
Barrow	22	1016.6	1017.1	5	-8	-1.8	-1.6	24	21	-31	7	0	30	-10	67	.06	-.04	.02	4	0	.7	13	9.0	NE	33	E	17	10	5	15	6.0	--
Bethel	21	1007.1	1008.5	26	10	18.1	-8.7	46	30	-18	3	0	30	14	82	1.11	.56	.40	14	0	10.4	23	13.0	S	*40	SSW	19	7	2	21	7.2	--
Cordova	40	1005.1	1006.9	42	25	33.2	-3.2	51	15	16	7	0	28	27	76	3.55	-1.52	1.11	16	0	17.6	11	7.0	E	*28	ESE	4	6	5	19	6.9	--
Fairbanks	436	991.5	1009.3	33	10	21.6	-7.3	50	30	-21	3	0	30	12	63	.19	-.10	.14	4	0	2.3	17	5.2	N	*17	N	22	8	7	15	6.0	--
Juneau	15	1008.1	1008.9	46	30	38.0	-1.5	54	16+	24	2+	0	24	29	71	2.46	-.52	.80	13	0	4.1	1	7.9	ESE	35	SE	4	4	6	20	8.0	53
Kotzebue	10	1011.2	1011.7	18	-4	7.2	-6.6	34	29+	-28	4	0	30	3	80	.16	-.20	.10	4	0	3.6	20	11.3	ESE	*44	E	16	11	8	11	5.2	--
McGrath	334	996.6	1009.7	31	4	17.1	-8.9	47	28+	-21	3	0	30	10	69	.95	.46	.66	6	0	9.6	34	4.5	N	*24	SSE	20	6	9	15	6.4	--
Nome	13	1008.8	1009.5	22	4	12.8	-8.2	40	30	-17	3+	0	30	9	79	.32	-.46	.11	9	0	7.3	21	9.6	ENE	40	E	13	9	4	17	6.1	58
Northway	1713	943.4	1007.7	37	10	23.5	-2.3	45	5+	-8	12	0	30	16	72	.34	-.01	.22	5	0	8.8	17	5.7	NW	*18	NW	9	5	7	18	7.1	--
St. Paul Island	22	1008.1	1009.2	29	21	24.9	-5.2	37	27+	2	4	0	27	23	89	.68	-.34	.24	14	0	5.9	17	----	---	--	---	--	3	11	16	7.6	--
Yakutat	28	1007.1	1008.2	41	26	33.4	-3.1	52	15	19	25+	0	29	30	88	5.82	-2.16	1.38	19	0	46.5	56	7.5	E	*41	SE	4	5	4	21	7.7	--

a Sun below horizon entire month. b Sun below horizon continuously until January 23rd. Also see footnotes with current data.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

Table 4

Place	Date	Time	Length of path, miles	Width of path, yards	Number of persons: Killed	Number of persons: Injured	Estimated damage: Property (exclusive of crops)	Estimated damage: Crops	Character of storm	Remarks
Dec. 1954										
Boyertown, Pa.	30	Daytime					$1,000,000		Electrical	Lightning struck and fired big lumber yard, which heavily damaged 8 adjoining homes and their contents; also damaged lodge hall.
Feb. 1955										
Houston (67 miles west-southwest of), Tex.	4	1:49 p.m.			0	0	0	$0	Tornado	Funnel cloud reported, apparently did not reach ground.
Tallahassee, (5 miles east of), Fla.	17	2:13 p.m.			0	0	0	0	do	Funnel cloud reported by aircraft pilot.
Mar. 1955										
Hilo, Hawaii	18	5:20 p.m.	½	10	0	0	1,000	0	Waterspouts	2 waterspouts moved in from sea in west-southwestward direction. 3-car garage leveled and large tree downed by first waterspout as it swept over town. Second waterspout dissipated before reaching town.
	20									Minor storm reported at Hilo, Hawaii.

SOLAR RADIATION DATA

Table 30 Solar radiation intensities, tabulated in langleys per minute on a surface normal to the direction of the sun.

Date	Sun's zenith distance: A.M. 78.7°	75.7°	70.7°	60.0°	0.0°	P.M. 60.0°	70.7°	75.7°	78.7°
	MADISON, WIS.								
	Air mass: 4.81	3.84	2.88	1.92	N	1.92	2.88	3.84	4.81
May									
4	0.55	0.60	0.62	0.83	1.28	1.18	1.02	0.85	0.69
5	.50	.70	.89	1.11	1.46	1.19	1.01	.86	.72
7	----	----	----	----	----	1.10	.85	.60	.44
8	.89	.98	1.11	1.27	1.52	1.29	1.12	.99	.90
11	----	----	.76	1.09	----	----	----	----	----
14	.59	.72	.90	1.13	1.30	1.12	.95	.79	.68
15	.78	.88	1.01	1.19	1.44	1.14	.96	.83	.72
16	.65	.75	.89	1.06	1.35	1.02	----	----	----
17	.86	.96	1.08	1.25	1.44	1.15	.99	.83	.74
18	----	----	----	1.16	1.31	.90	.66	.49	.36
20	----	----	----	.91	1.27	.97	.77	.64	.52
21	.66	.76	.89	1.09	----	.79	----	----	----
30	.84	.95	1.07	1.23	1.45	1.16	.98	.85	.74
Averages	.70	.81	.92	1.11	1.38	1.08	.93	.77	.65

SOLAR RADIATION DATA

Table 33.-Daily totals and average daily totals by weeks of solar radiation (direct and diffuse) received on a horizontal surface, tabulated in langleys. DELAYED DATA

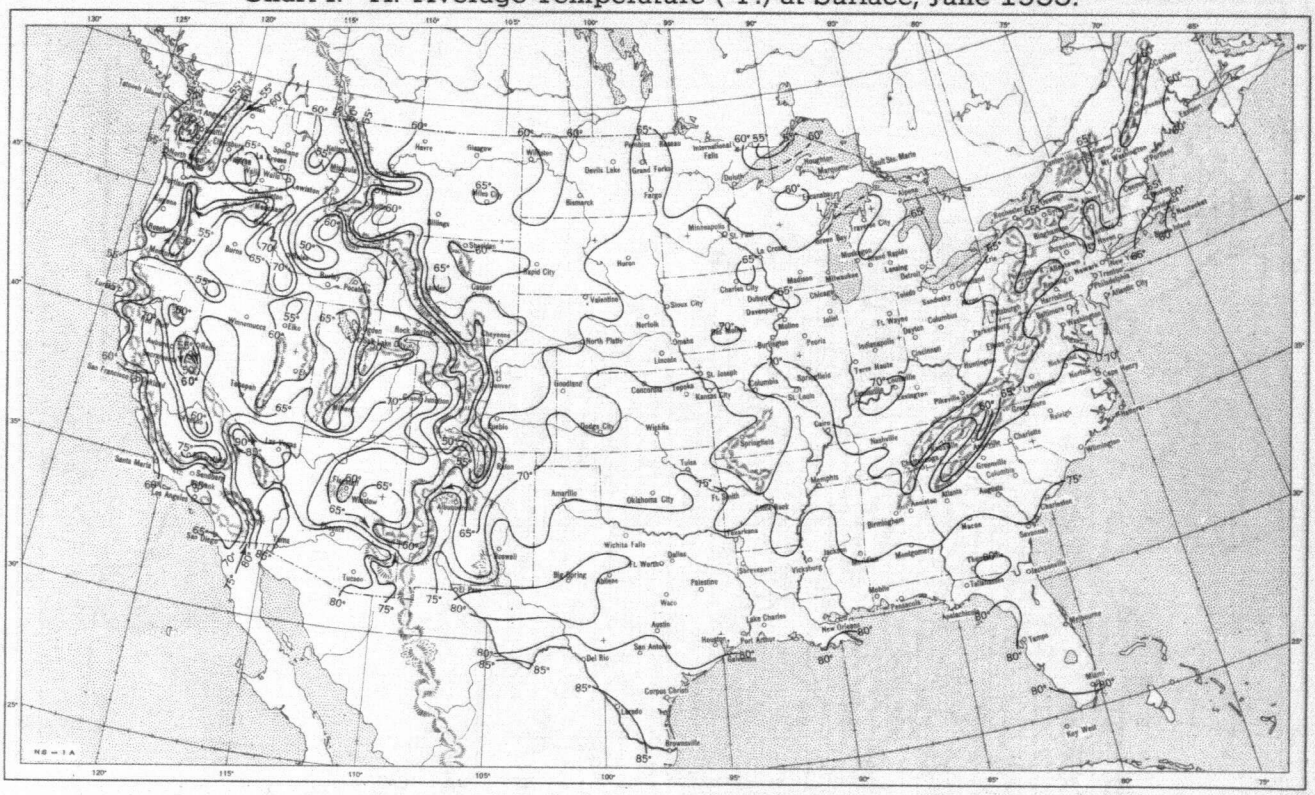
1954	* Columbus, Ohio	1954 Dec.	* Columbus, Ohio	Griffin, Ga.	1955 Jan.	Albrook Air Base Panama, C. Z.	Annette, Alaska	* Columbus, Ohio	Ft. Huachuca, Ariz.	Seabrook, N. J.	Feb.	Albrook Air Base Panama, C. Z.	* Columbus, Ohio	Seattle, Wash. (U. of W.)	Mar.	Albrook Air Base Panama, C. Z.	* Columbus, Ohio	Apr.	Albrook Air Base Panama, C. Z.	* Columbus, Ohio	Seattle, Wash. (U. of W.)	May	Albrook Air Base Panama, C. Z.	* Columbus, Ohio
Nov. 5-----	227	3	102	341	1	525	32	112	†	188	5	466	40	157	5	666	74	2	426	515	202	7	551	445
Nov. 6-----	299	4	135	320	2	584	18	212	70	148	6	406	38	29	6	524	244	3	401	589	297	8	311	639
Nov. 7-----	281	5	182	59	3	570	18	98	356	172	7	483	267	17	7	653	407	4	448	491	453	9	337	487
Nov. 8-----	266	6	216	213	4	389	13	27	340	162	8	351	82	107	8	671	279	5	431	515	489	10	392	316
Nov. 9-----	291	7	188	342	5	456	12	28	382	152	9	294	312	211	9	686	395	6	603	554	490	11	444	526
Nov. 10-----	288	8	151	162	6	402	1	52	371	85	10	422	115	221	10	692	224	7	650	242	373	12	565	438
Nov. 11-----	270	9	42	280	7	442	20	236	374	241	11	352	271	158	11	684	473	8	561	639	130	13	435	106
Average-----	275		145	245		481	16	109	316	164		396	161	128		654	300		503	507	348		434	422
Nov. 12-----	300	10	46	362	8	256	85	132	318	236	12	487	334	36	12	678	401	9	535	609	284	14	398	498
Nov. 13-----	252	11	226	315	9	433	98	54	397	35	13	469	368	112	13	679	375	10	373	607	307	15	452	740
Nov. 14-----	224	12	28	258	10	391	25	78	397	175	14	542	80	64	14	653	481	11	539	146	483	16	471	688
Nov. 15-----	266	13	44	46	11	370	6	224	346	64	15	501	289	68	15	635	141	12	533	496	254	17	462	763
Nov. 16-----	110	14	27	73	12	410	40	61	370	209	16	457	29	100	16	464	300	13	620	323	293	18	477	752
Nov. 17-----	229	15	72	347	13	203	35	185	295	54	17	565	218	275	17	498	356	14	652	259	421	19	490	582
Nov. 18-----	222	16	87	343	14	317	18	112	88	253	18	438	341	198	18	568	356	15	629	230	212	20	353	640
Average-----	229		76	249		340	44	121	316	146		494	237	122		597	344		555	382	322		443	666
Nov. 19-----	140	17	24	152	15	150	73	241	†	72	19	519	172	147	19	543	529	16	671	605	342	21	388	621
Nov. 20-----	31	18	73	280	16	258	43	207	†	223	20	461	133	242	20	446	289	17	645	639	523	22	417	414
Nov. 21-----	62	19	126	123	17	210	65	262	†	245	21	514	66	159	21	472	87	18	593	417	298	23	310	479
Nov. 22-----	60	20	258	331	18	384	113	255	†	252	22	585	129	100	22	424	234	19	399	203	438	24	81	392
Nov. 23-----	140	21	192	263	19	402	27	62	405	151	23	660	410	51	23	443	440	20	410	406	279	25	353	340
Nov. 24-----	81	22	166	309	20	542	53	258	405	275	24	689	385	99	24	530	565	21	487	270	456	26	518	568
Nov. 25-----	46	23	215	324	21	491	16	42	410	196	25	---	340	94	25	342	264	22	448	532	225	27	352	518
Average-----	80		151	254		348	56	189	---	202		571	234	127		457	344		522	439	366		346	476
Nov. 26-----	54	24	144	344	22	429	47	117	420	196	26	---	50	127	26	500	---	23	486	263	611	28	383	271
Nov. 27-----	26	25	212	135	23	208	21	270	430	145	27	---	190	245	27	444	---	24	486	404	524	29	324	613
Nov. 28-----	80	26	142	123	24	475	42	241	475	168	28	648	143	226	28	580	---	25	445	218	513	30	362	220
Nov. 29-----	79	27	112	204	25	420	22	164	318	186	Mar 1	616	103	127	29	462	---	26	611	129	242	31	351	787
Nov. 30-----	200	28	6	107	26	402	22	152	376	264	2	579	449	190	30	436	---	27	581	336	411	Jun 1	367	768
Dec. 1-----	84	29	20	65	27	372	24	320	432	---	3	689	206	137	31	172	---	28	537	684	584	2	334	764
Dec. 2-----	99	30	76	349	28	584	59	138	†	---	4	629	116	352	Apr 1	420	520	29	363	677	310	3	360	690
		31	128	149																				
Average-----	89					413	34	201	409	192		632	180	201		431	---		501	387	456		355	588
		Avg.	105	185																				
					29	474	76	346	†	209								30	565	676	567			
					30	535	107	277	†	142								May 1	441	619	367			
					31	312	77	130	†	328								2	466	624	287			
					Feb. 1	403	75	71	†	73								3	586	596	348			
					2	509	36	302	452	82								4	495	588	661			
					3	444	32	361	461	---								5	451	674	496			
					4	480	30	341	†	352								6	484	680	677			
					Avg.	451	62	261	---	199									498	637	486			

Note.--Langley is the unit used to denote one gram calorie per square centimeter.
Values in parentheses are interpolated.

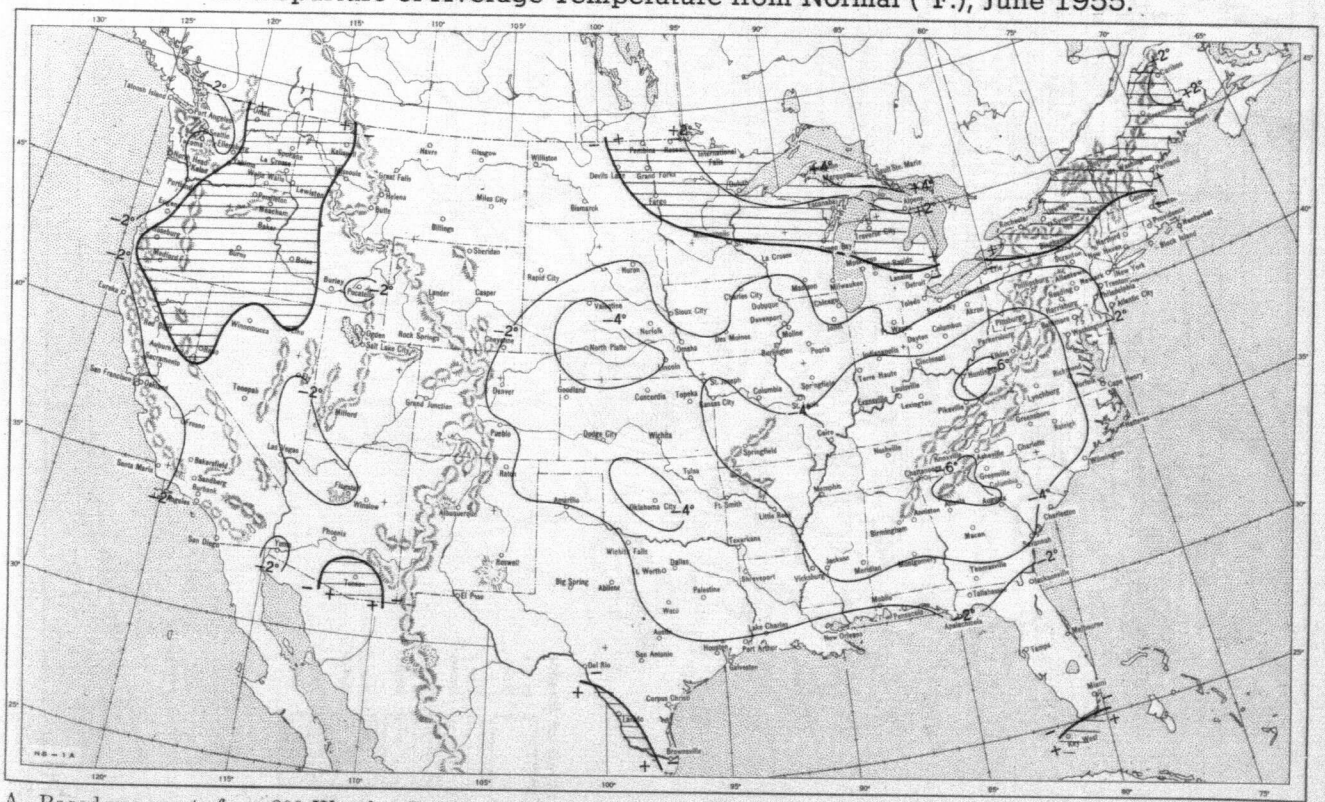
* These are corrected data.
† Instrument inoperative.

MWRC, Asheville, N.C. --- 9/26/55 --- 1850

Chart I. A. Average Temperature (°F.) at Surface, June 1955.



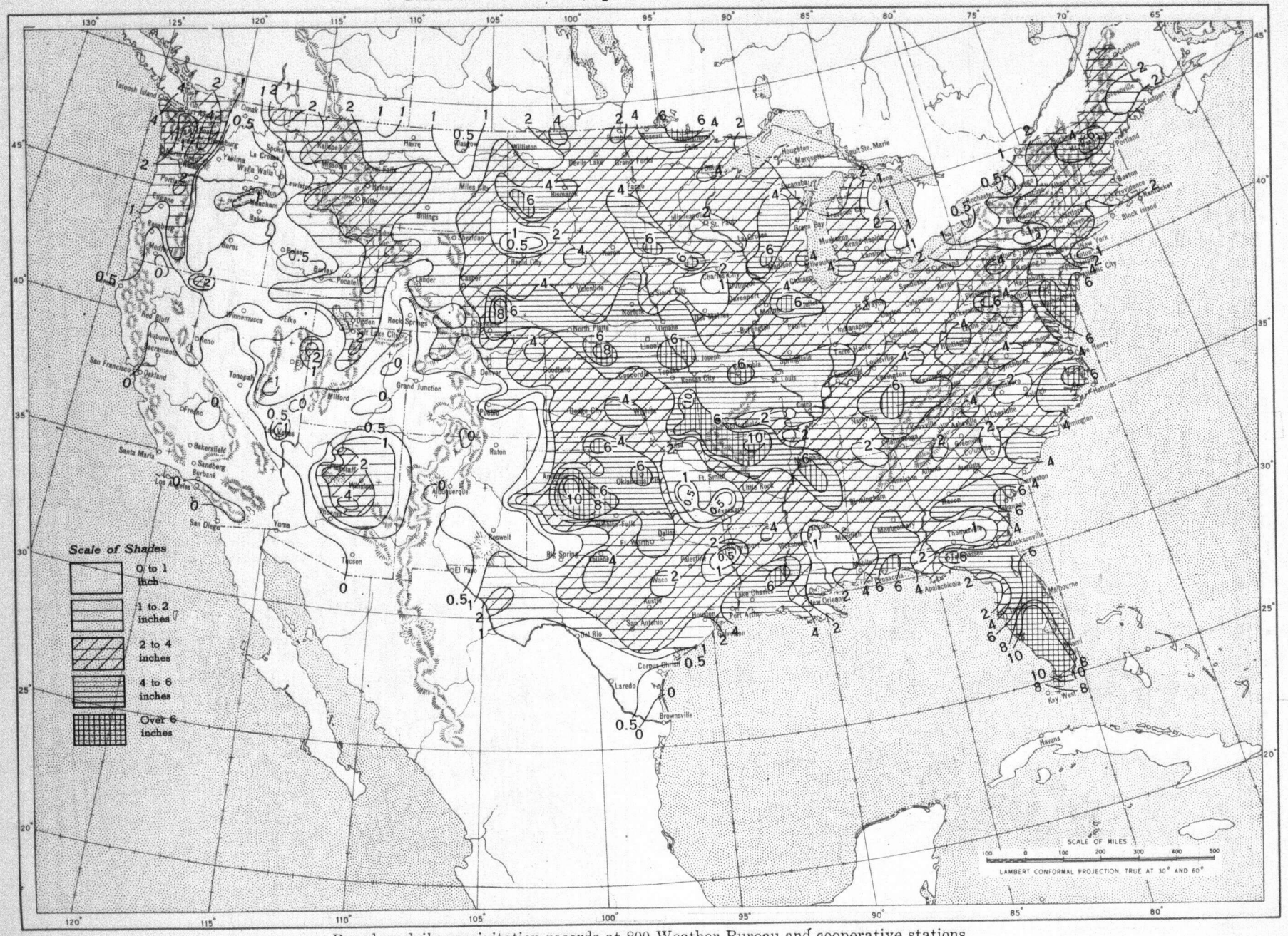
B. Departure of Average Temperature from Normal (°F.), June 1955.



A. Based on reports from 800 Weather Bureau and cooperative stations. The monthly average is half the sum of the monthly average maximum and monthly average minimum, which are the average of the daily maxima and daily minima, respectively.

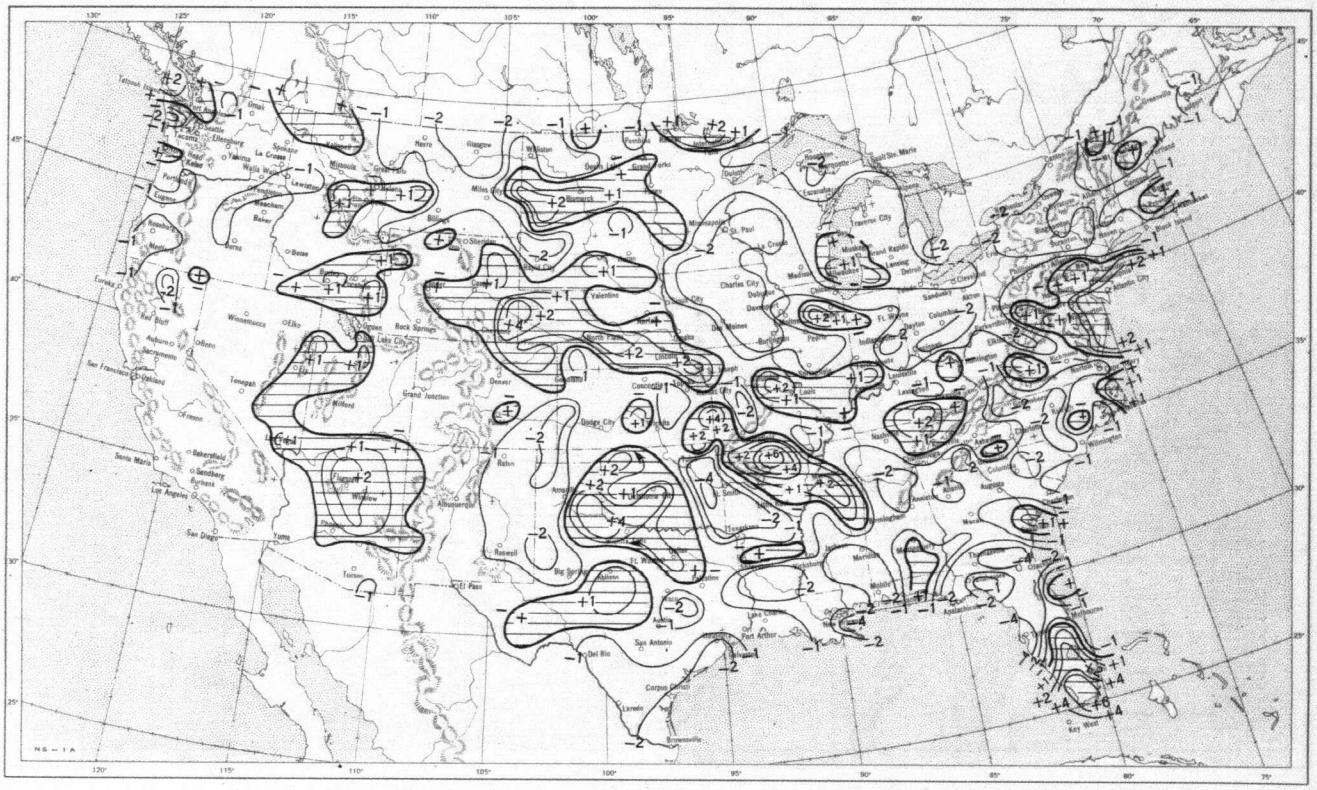
B. Normal average monthly temperatures are computed for Weather Bureau stations having at least 10 years of record.

Chart II. Total Precipitation (Inches), June 1955.

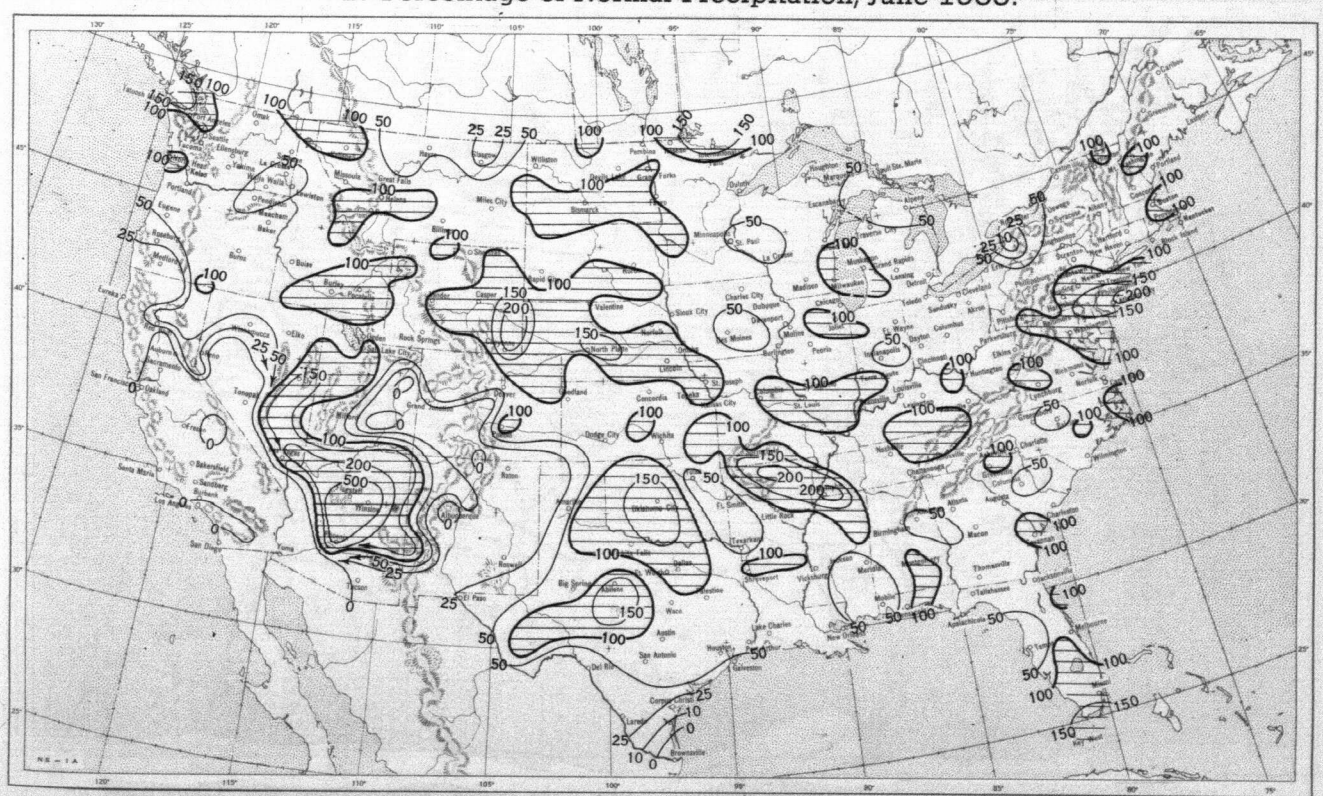


Based on daily precipitation records at 800 Weather Bureau and cooperative stations.

Chart III. A. Departure of Precipitation from Normal (Inches), June 1955.

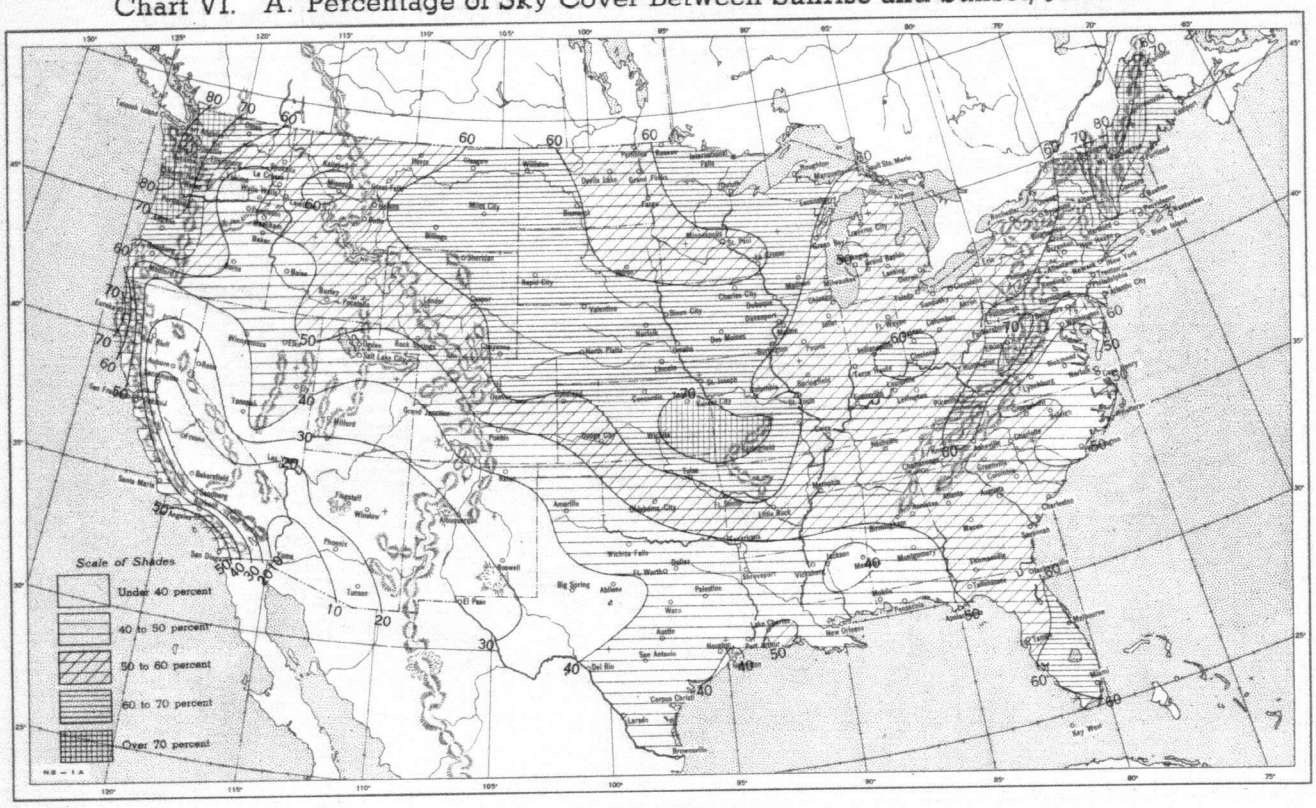


B. Percentage of Normal Precipitation, June 1955.

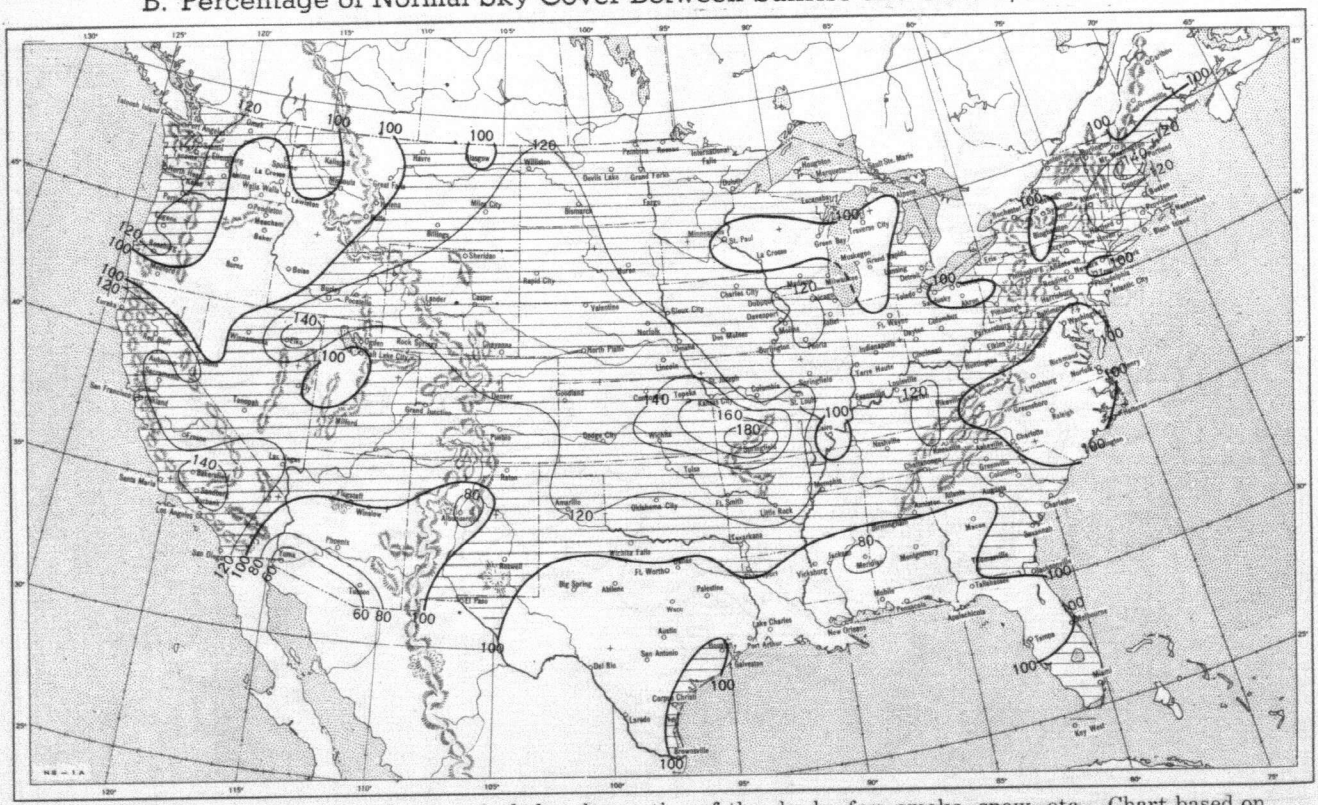


Normal monthly precipitation amounts are computed for stations having at least 10 years of record.

Chart VI. A. Percentage of Sky Cover Between Sunrise and Sunset, June 1955.

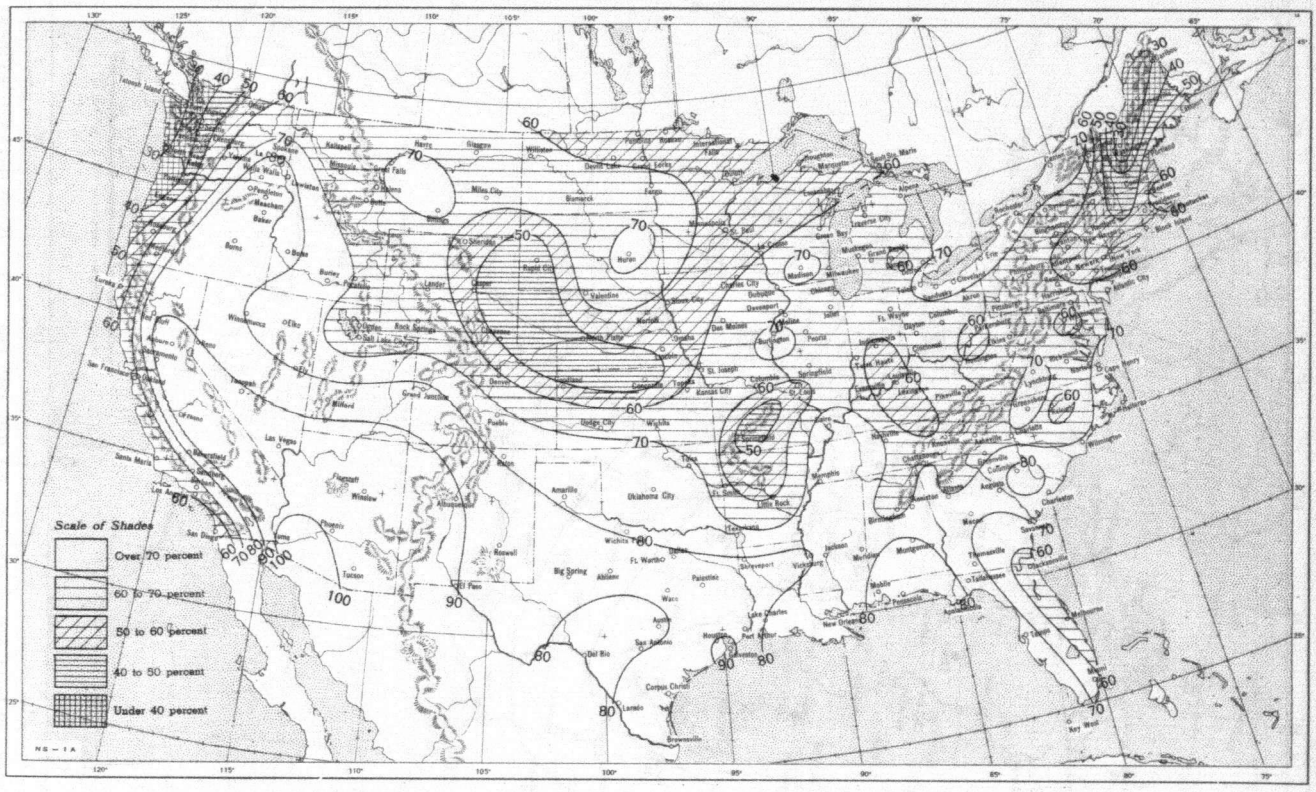


B. Percentage of Normal Sky Cover Between Sunrise and Sunset, June 1955.

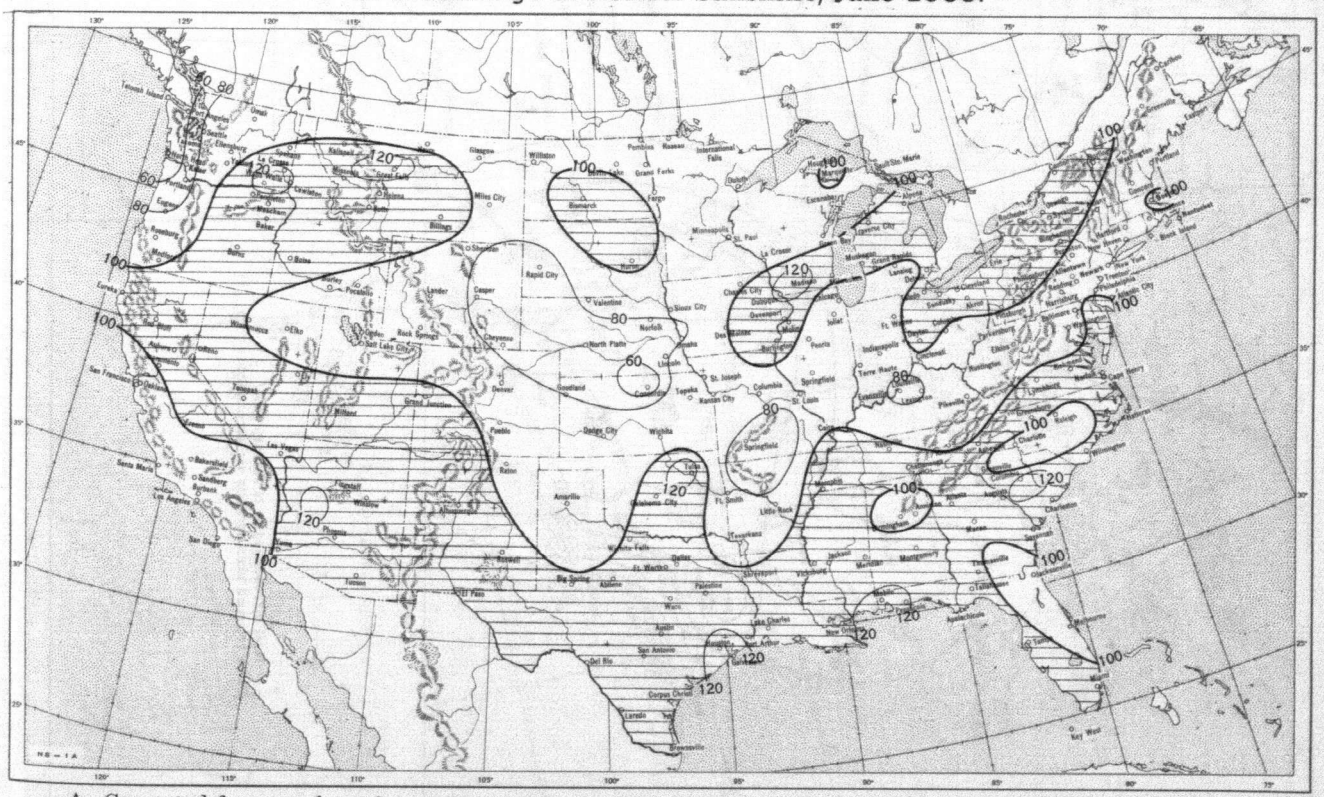


A. In addition to cloudiness, sky cover includes obscuration of the sky by fog, smoke, snow, etc. Chart based on visual observations made hourly at Weather Bureau stations and averaged over the month. B. Computations of normal amount of sky cover are made for stations having at least 10 years of record.

Chart VII. A. Percentage of Possible Sunshine, June 1955.



B. Percentage of Normal Sunshine, June 1955.



A. Computed from total number of hours of observed sunshine in relation to total number of possible hours of sunshine during month. B. Normals are computed for stations having at least 10 years of record.

Chart VIII. Average Daily Values of Solar Radiation, Direct + Diffuse, June 1955. Inset: Percentage of Normal Average Daily Solar Radiation.

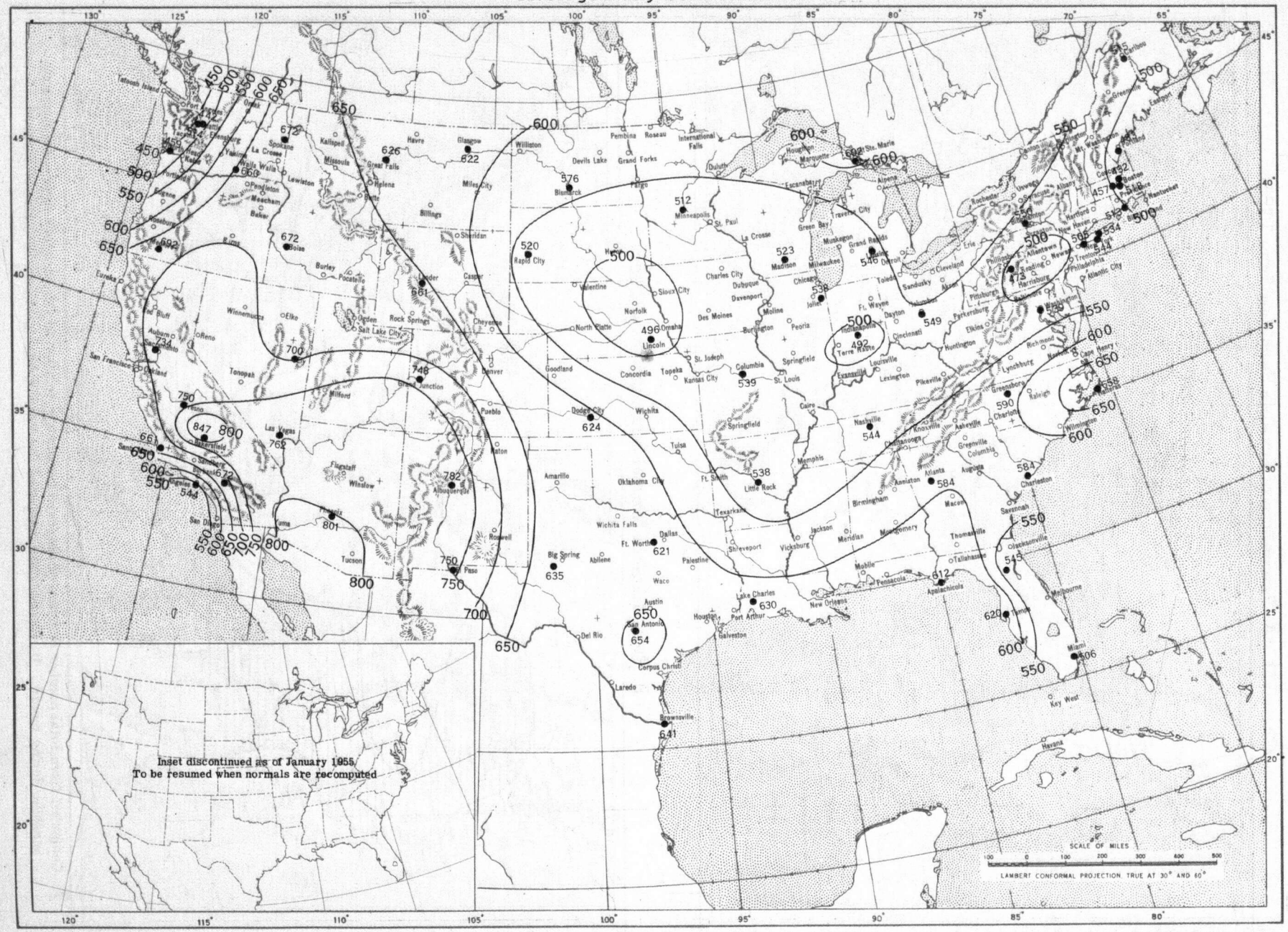
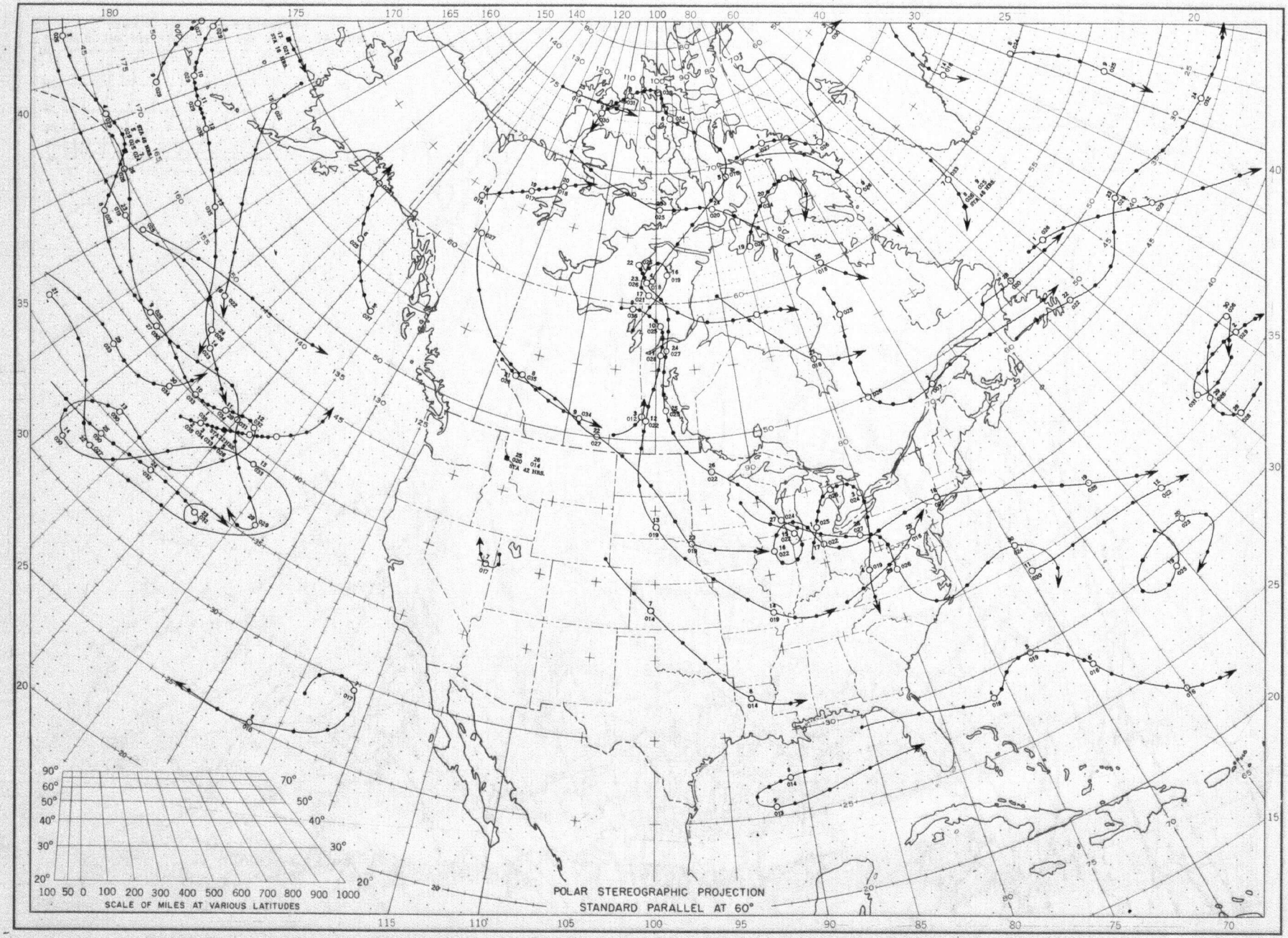


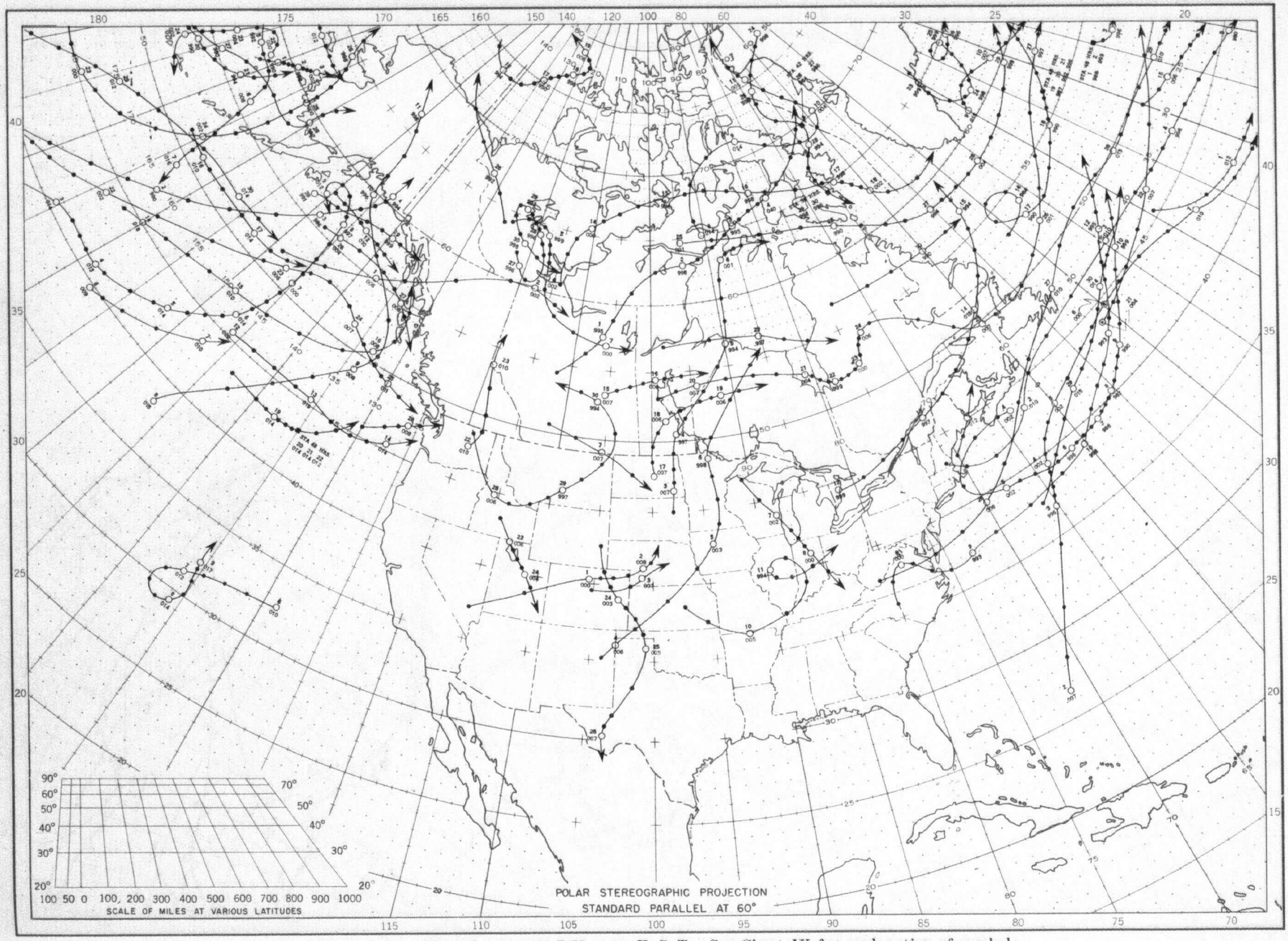
Chart shows mean daily solar radiation, direct + diffuse, received on a horizontal surface in langleys (1 langley = 1 gm. cal. cm. $^{-2}$). Basic data for isolines are shown on chart. Further estimates are obtained from supplementary data for which limits of accuracy are wider than for those data shown.

Chart IX. Tracks of Centers of Anticyclones at Sea Level, June 1955.



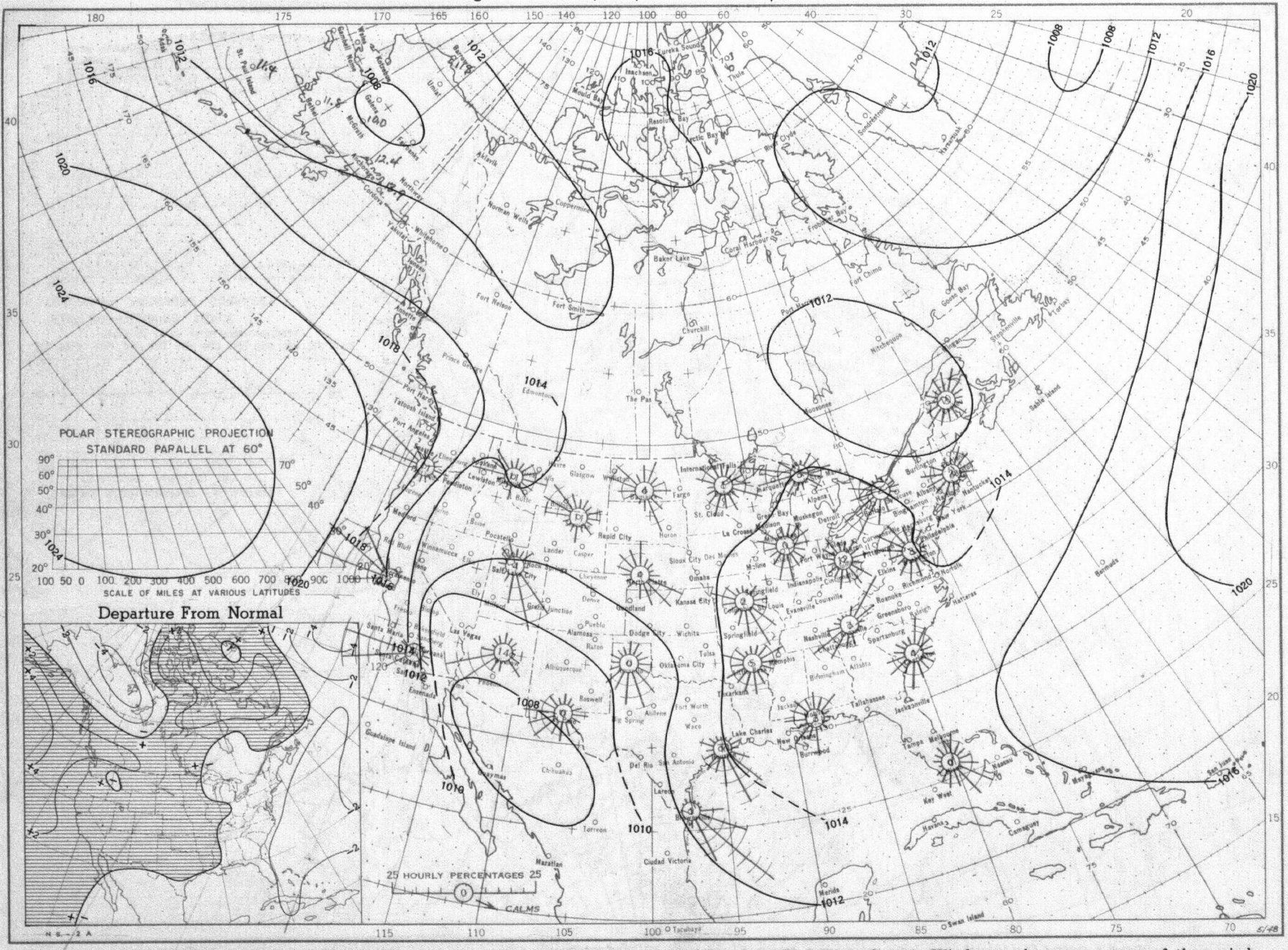
Circle indicates position of center at 7:30 a. m. E. S. T. Figure above circle indicates date, figure below, pressure to nearest millibar. Dots indicate intervening 6-hourly positions. Squares indicate position of stationary center for period shown. Dashed line in track indicates reformation at new position. Only those centers which could be identified for 24 hours or more are included.

Chart X. Tracks of Centers of Cyclones at Sea Level, June 1955.



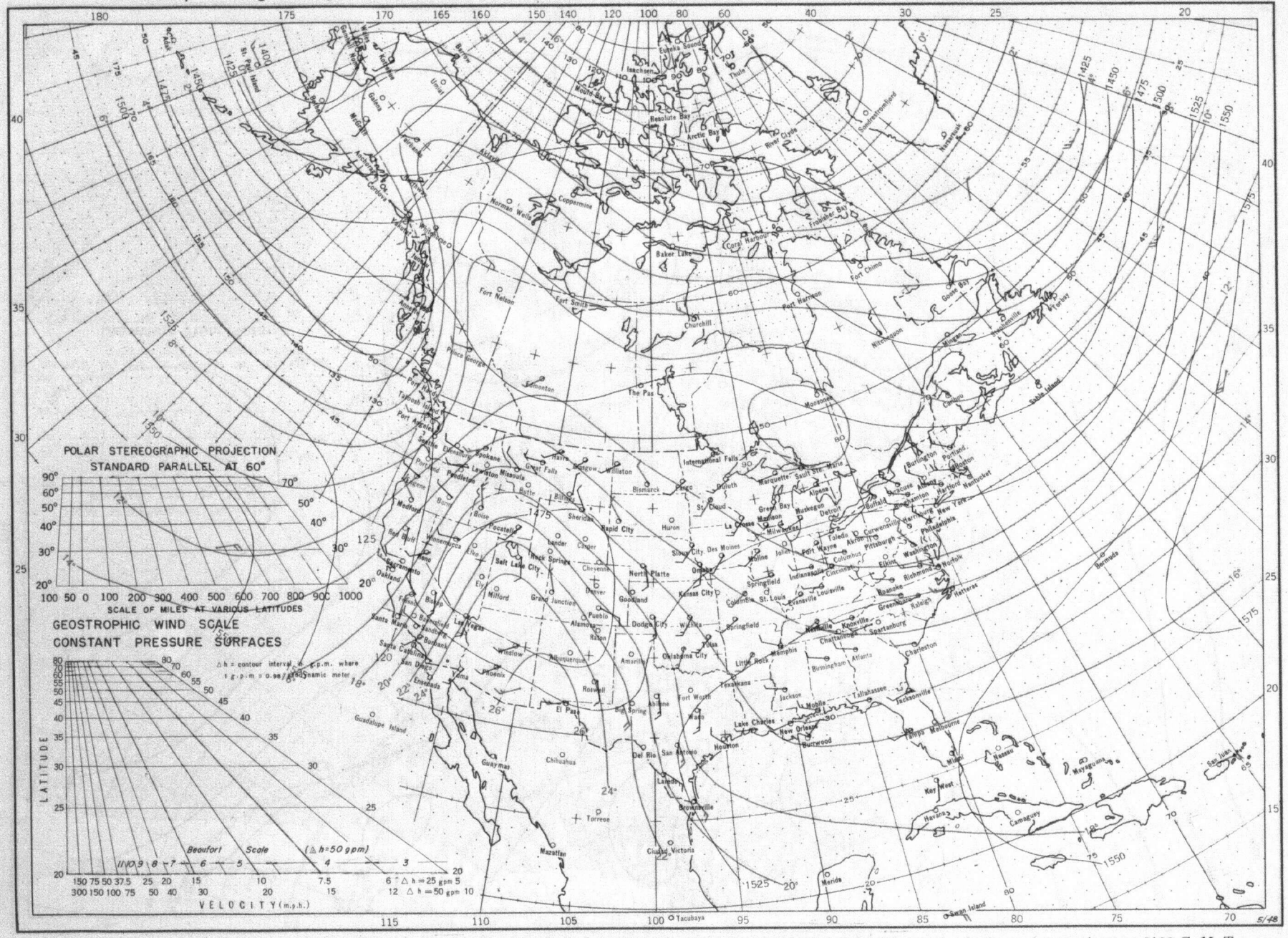
Circle indicates position of center at 7:30 a. m. E. S. T. See Chart IX for explanation of symbols.

Chart XI. Average Sea Level Pressure (mb.) and Surface Windroses, June 1955. Inset: Departure of Average Pressure (mb.) from Normal, June 1955.



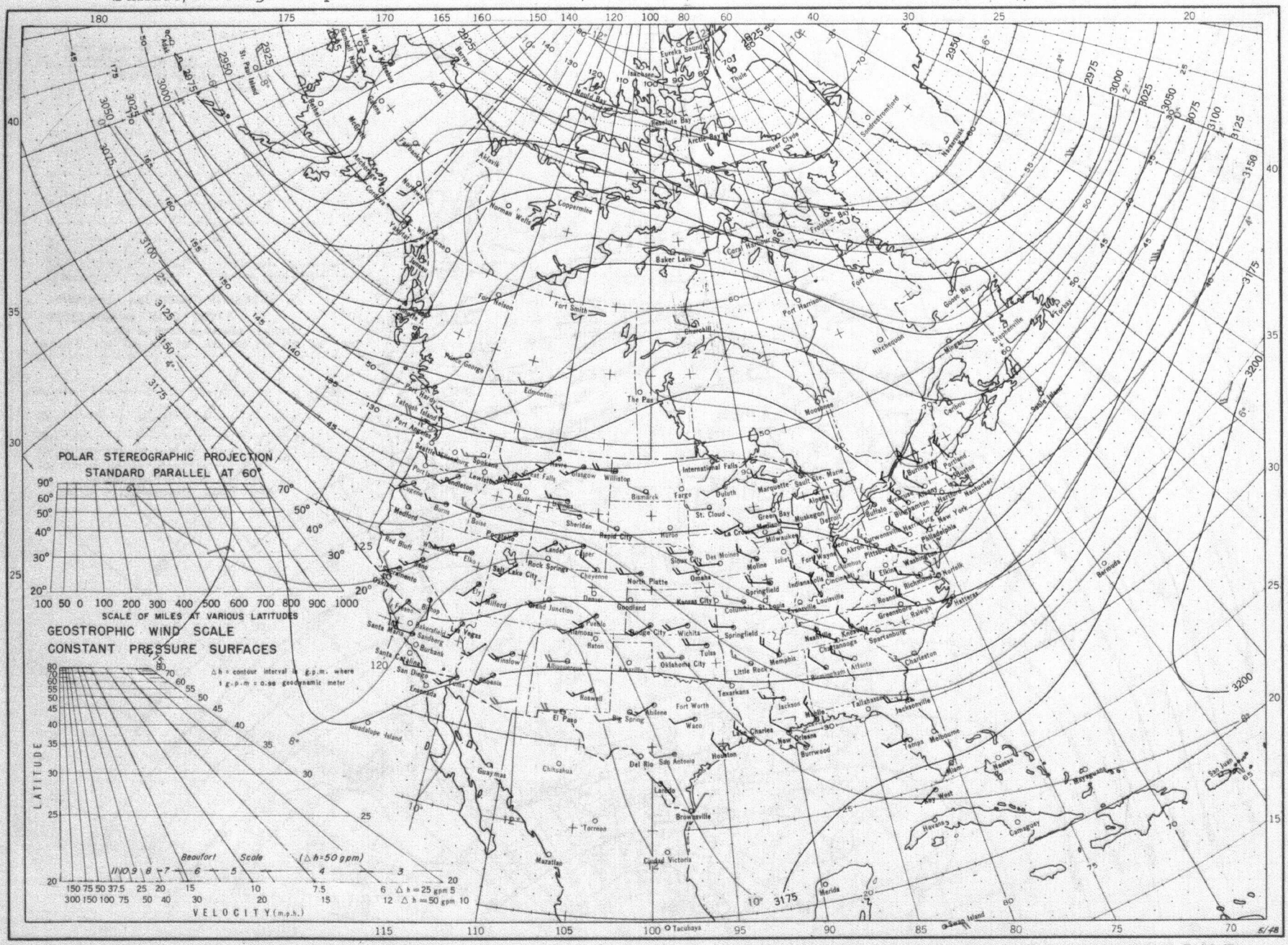
Average sea level pressures are obtained from the averages of the 7:30 a.m. and 7:30 p.m. E.S.T. readings. Windroses show percentage of time wind blew from 16 compass points or was calm during the month. Pressure normals are computed for stations having at least 10 years of record and for 10° intersections in a diamond grid based on readings from the Historical Weather Maps (1899-1939) for the 20 years of most complete data coverage prior to 1940.

Chart XII. Average Dynamic Height in Geopotential Meters (1 g.p.m. = 0.98 dynamic meters) of the 850-mb. Pressure Surface, Average Temperature in °C. at 850 mb., and Resultant Winds at 1500 Meters (m.s.l.), June 1955.



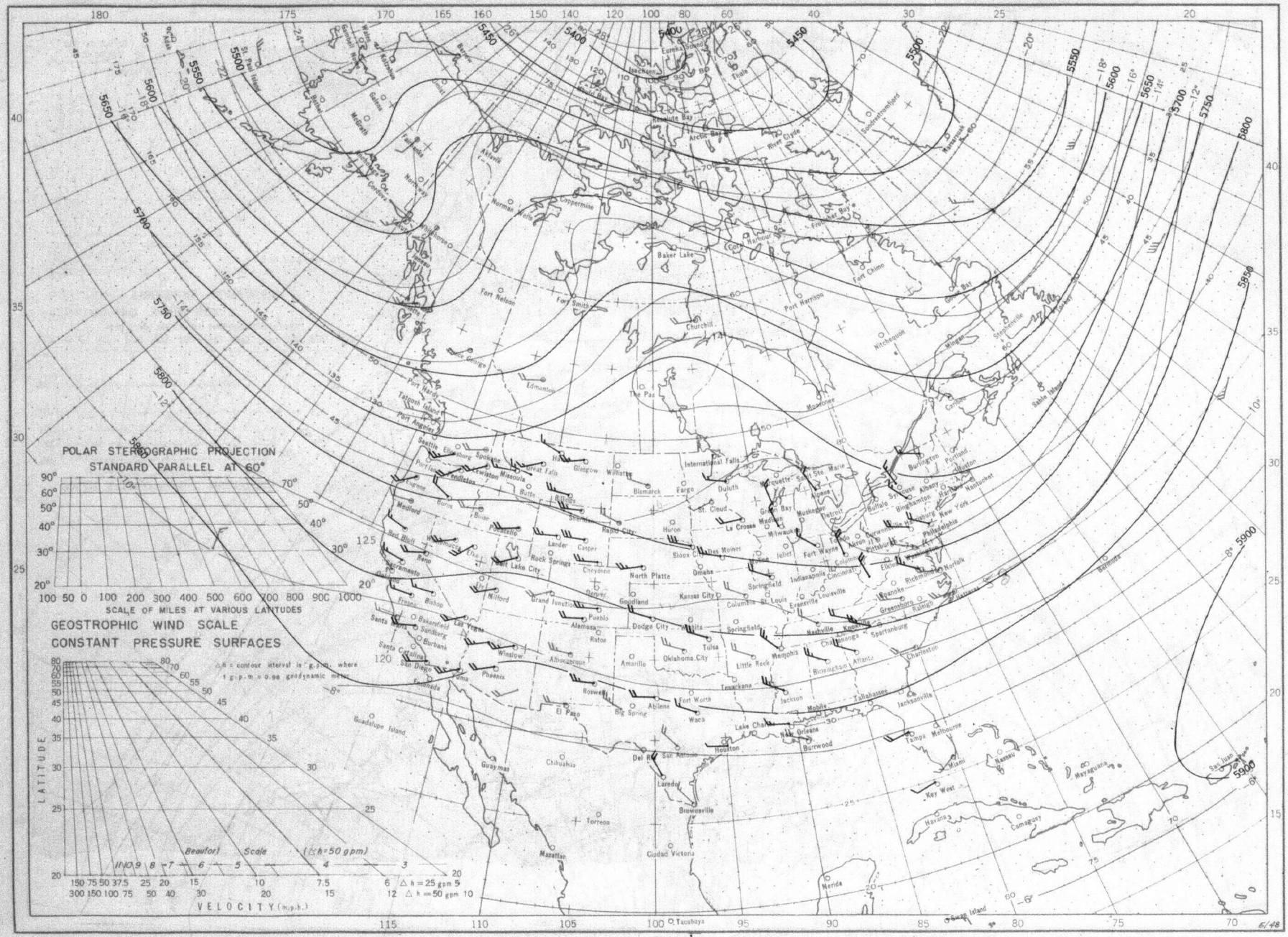
Contour lines and isotherms based on radiosonde observations at 0300 G. M. T. Winds shown in black are based on pilot balloon observations at 2100 G. M. T.; those shown in red are based on rawins taken at 0300 G. M. T. Wind barbs indicate wind speed on the Beaufort scale.

Chart XIII. Average Dynamic Height in Geopotential Meters (1 g.p.m.. = 0.98 dynamic meters) of the 700-mb. Pressure Surface, Average Temperature in °C. at 700 mb., and Resultant Winds at 3000 Meters (m.s.l.), June 1955.



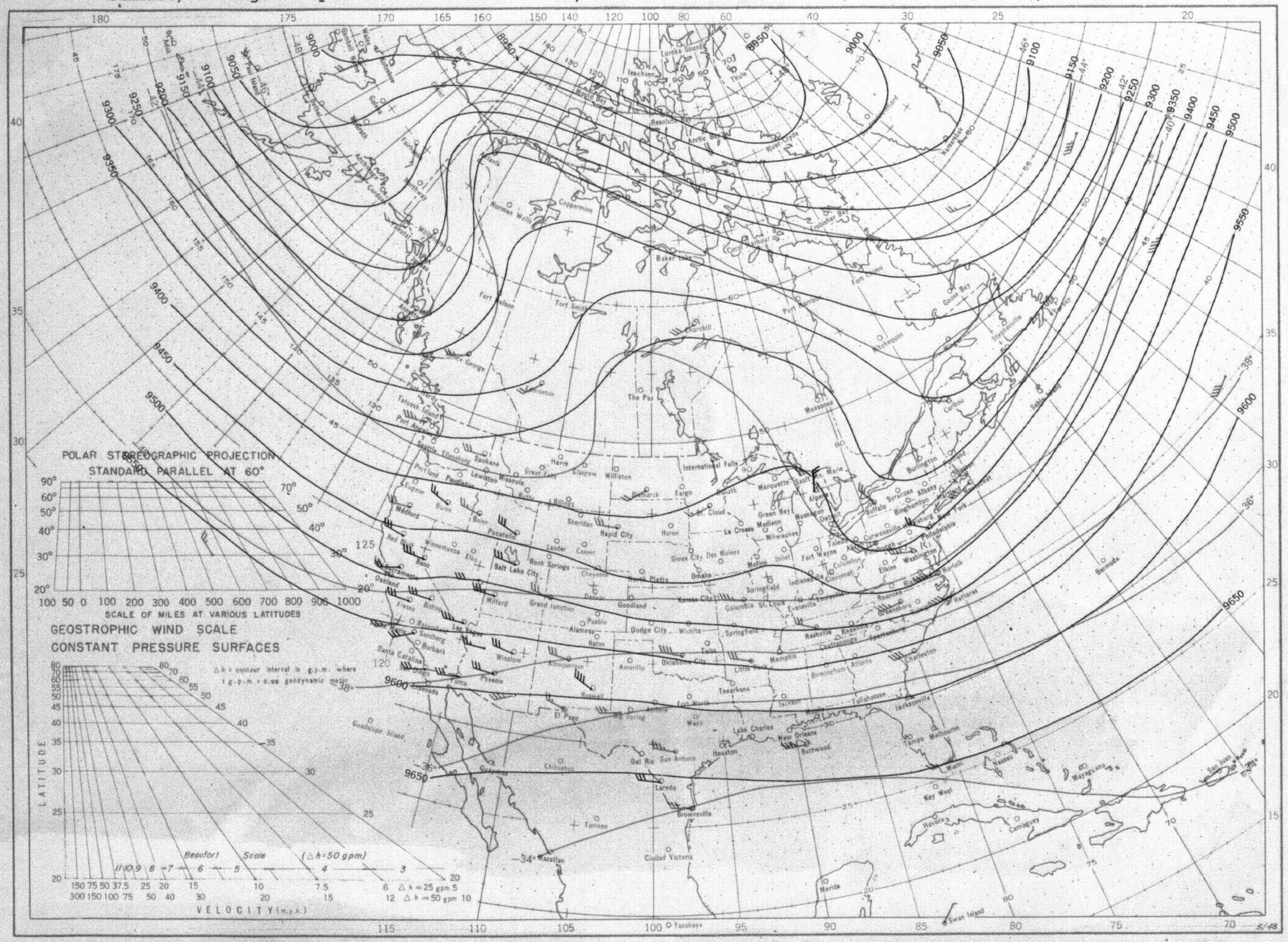
Contour lines and isotherms based on radiosonde observations at 0300 G. M. T. Winds shown in black are based on pilot balloon observations at 2100 G. M. T.; those shown in red are based on rawins taken at 0300 G. M. T. Wind barbs indicate wind speed on the Beaufort scale.

Chart XIV. Average Dynamic Height in Geopotential Meters (1 g.p.m. = 0.98 dynamic meters) of the 500-mb. Pressure Surface, Average Temperature in °C. at 500 mb., and Resultant Winds at 5000 Meters (m.s.l.), June 1955.



Contour lines and isotherms based on radiosonde observations at 0300 G. M. T. those shown in red are based on rawins at 0300 G. M. T. Winds shown in black are based on pilot balloon observations at 2100 G. M. T.; Wind barbs indicate wind speed on the Beaufort scale.

Chart XV. Average Dynamic Height in Geopotential Meters (1 g.p.m. = 0.98 dynamic meters) of the 300-mb. Pressure Surface, Average Temperature in °C. at 300 mb., and Resultant Winds at 10,000 Meters (m.s.l.), June 1955.



Contour lines and isotherms based on radiosonde observations at 0300 G. M. T. those shown in red are based on rawins at 0300 G. M. T. Winds shown in black are based on pilot balloon observations at 2100 G. M. T.; Wind barbs indicate wind speed on the Beaufort scale.